

Vol. LXXII—No. 4

Hamilton, Illinois, April, 1932

Monthly, \$1.00 a Year

Drifting Bees May Make Production Records of Little Value

By George E. King
Illinois

DRIFTING is the term used to cover the casual and peaceable shifting of worker bees from the colony in which they are reared to a neighboring colony. It takes place without the least indication of protest by the colony into which the drifting bees enter. The newcomers remain as inhabitants of their adopted home, but during a following flight they may again drift to some other colony.

Drifting is not peculiar to worker bees, for drones also drift from colony to colony, and virgin queens sometimes do so, if entering a colony other than the one in which they were reared may be called drifting.

The occurrence of drifting seems to have been recognized since an early date, and the beekeeper is urged to avoid placing his colonies where drifting is likely to occur. The reasons given for this are the undue weakening of colonies, the prevention of disease, and the desire of the beekeeper to keep each colony as a distinct individual unit. Yet no one seems to have made an attempt to find out just how frequent or extensive drifting is.

Frequently one colony appears to outyield other colonies near it, and so the queen in it is selected as a suitable mother to requeen the apiary. She should be a choice queen if she is responsible for the extra showing made by her colony. However, if workers reared in neighboring colonies have drifted into her colony without an equal drift back to them, the queen cannot be credited with the results shown. Because of the disappointments which so frequently follow attempts to rear superior queens from such mothers, it may be questioned whether many of the reported exceptional queens do not appear so merely because an unusual number of workers drifted into their colonies and remained there.

A 30 per cent drift between the bees of neighboring hives seems too great, but here is the proof. Now what about straight rows and uniformity in the apiary? What about disease and robbing, and so on?

In a record of drifting worker bees obtained by the writer while at the University of Illinois, it was found that the amount of drifting between colonies was often over 30 per cent of the total number of bees. The bees were marked and the figures were based on the number of marked bees found to have left the colonies in which they originated.

Because of the ease with which a marked bee could be seen after it had drifted to another colony, the removal of them and the recording of the observations was easy. The colonies were in a row and bore numbers from one end of the row to the other. The marked bees were introduced into No. 1 colony on four different days and records were made of all the marked individuals found in any other colony in the row. The entrance to each of the hives was distinguishable by some mark involving both form and color, so that the hive differences were more noticeable than is usually the case in the apiary.

The intervals between the entrances, when measured from the first colony, were 4 feet 8 inches, 8 feet 8 inches, 12 feet 7 inches, 16 feet 6 inches, 24 feet 5 inches. There was an average of over four feet between the entrances of any two hives.

The bees used for marking were newly emerged Italian workers. As soon as possible after being marked with a spot of color, they were in-

troduced into colony No. 1 on four successive days.

On the basis of 108 bees as the total of those which drifted, the percentage of drift from colony No. 1 into colonies Nos. 2 to 7 amounted to the following: 33.33 per cent, 32.41 per cent, 21.30 per cent, 1.85 per cent, 9.25 per cent, and 1.85 per cent, respectively.

There are factors other than the distance of colonies from each other which influence drifting. If distance alone had been responsible, the per cent of drifting bees would have been divided between colonies Nos. 2 to 7 at a rate proportionate to their distances from colony No. 1, but the figures do not even approach such a proportion.

Another relation of interest is that of the rate of drifting in comparison with the age of bees. Because weather, conditions within the colony, and racial differences might account for differences between bees of different colonies, it must be borne in mind that the figures obtained are from results observed under ordinary summer conditions and for Italian bees. Days on which no drifting occurred were for the most part rainy or otherwise unsuitable for regular flights.

Bees younger than four days old did no drifting, because that was the youngest age at which they flew outside. Some bees flew out each day of age beyond the fourth. The ages at which drifting appeared to be most prevalent were between the fifth and tenth days, which corresponds rather closely with the age at which young bees show a tendency to shift from activities within the colony to field work.

When bees were four days old, only one bee in five hundred found its way into a neighboring hive, due to the fact already stated that only a small per cent of the bees of this age fly out. By the time the bees

were fourteen days old, one bee in every thirteen had entered some hive other than the one in which it was raised. At thirty-two days of age one bee out of every twelve or less had found its way into another colony and was accepted as an inmate.

So this raises the question whether drifting is not much more general than usually supposed. What are its advantages and disadvantages? Is it the result of a haphazard mingling of young workers from several neighboring colonies during play flights,

or might there have been some more fundamental reason for it?

In practical apiary management the carefully kept production records of individual colonies apparently may be discounted because of conditions of which the beekeeper is unaware. The selection of choice breeding stock may be difficult or inaccurate for the same reason. There are so many things to consider in beekeeping of which so little is known that more information is certainly desirable. One of the things which will bear considerable investigation is drifting.

Alabama Sets New Standard

Department of Agriculture Establishes Rules for Accrediting of Apiaries Shipping Bees and Queens.

FOR years there has been talk of standardizing the business of queen-rearing and package shipping. Every shipper is a law unto himself and no two have the same ideal in mind. There is no established standard as to what constitutes a fair measure of value. The poultry industry publishes a standard of perfection in which is outlined in great detail just what characters represent purity in every recognized breed. A bird must measure up to this standard to be sold as pure stock.

Within recent years has grown up a business of large extent in the hatching and shipping of baby chicks. In order to insure safety to the buyer of such chicks, the agricultural departments in several states have established rules for accredited flocks. Poultrymen meeting these requirements may have their flocks designated as accredited. This does not in any way interfere with the business of those who do not care to have their flocks accredited, but it does give added prestige to those who do.

Alabama is the first state to adopt this plan for the beekeeping industry. The State Department of Agriculture in cooperation with the Alabama Polytechnic Institute and the Alabama Beekeepers' Association, have formulated preliminary rules for accredited apiaries. It is expected that these rules will be revised to meet suggestions of buyers and shippers after a trial has indicated fully what is required.

Thomas Atchison, state apiary inspector, is in direct charge of the accrediting, in cooperation with W. A. Ruffin, extension entomologist. It is our understanding that there is to be no compulsion about accrediting of apiaries. No shipper is required to make use of this special privilege unless he wishes to do so. To have his apiary accredited by the State Department of Agriculture, however, will give confidence to the

buyer living at a distance and will undoubtedly help his business.

An accredited apiary, according to the rules already adopted, must be carefully inspected for inferior stock and all poor or mismated queens must be culled. Bees must be of one recognized race, true to color and purely mated. If more than one race of bees is handled by one shipper, the apiaries must be at least seven miles apart by a straight line to avoid mixing of the races.

It need not be mentioned that the apiary must be free from disease, since the department refuses permission for the sale of either bees or queens from apiaries where disease is present, whether or not the apiary be accredited. All diseased colonies must be destroyed by fire, and no certificate is issued until later inspections insure that the apiary has remained free from disease for some time.

The object of the accrediting as stated by the department is, first, to standardize and improve the stock of bees and queens produced in Alabama; second, to protect the buyer from inferior or diseased bees; third, to assure the buyer high quality and purely mated bees and queens.

We feel that the Alabama Department of Agriculture is thus offering a very valuable service to the shippers of that state. We trust that it will lead to established standards for each of the recognized races of bees and that published rules will be offered stipulating just what the buyer may expect when he buys a package of bees. As it is now, one shipper measures a pound of bees as the weight when placed in the package. Another allows for shrinkage equal to the amount of honey which they may carry and insures that there will be a pound of bees when they reach the buyer.

Frank C. Pellett.

Attention—Supply Dealers, Queen Breeders, Package Shippers

The Bee Culture Laboratory at Washington, D. C., and the Field Laboratories at Baton Rouge, La., Laramie, Wyo., and Davis, Calif., receive many requests asking where bee supplies, queens, colonies and package bees may be purchased.

In order to give prompt and impartial advice, a mimeographed sheet giving the names of dealers in bee supplies, queens, package bees and colonies will be compiled and listed alphabetically by states. Those who desire to be included in this list should send their name and address to the Division of Bee Culture Investigations, United States Department of Agriculture, Washington, D. C., indicating whether they handle bee supplies, queens, packages, etc. Queen breeders should state the race of bees. The list will be made up the first week in May. This list of dealers will be used merely for the information of correspondents, and no endorsement as to quality and price will be implied.

A. L. Roberts, of Tulare, Passes On

It is said that "Death loves a shining mark." As we look over the list of members we have lost during the past year, this would seem true. Today we record the death of A. L. Roberts, of Tulare. Mr. Roberts was one of our best beekeepers. He was a faithful member of the state association. Always in his place at the convention to work for the best interest of the industry. An active member in his county association. We will miss him. The members of the county association will miss him. His family will miss him most.

Cary W. Hartman.

A German Honey Cooking Booklet

There has just come to our hands a 32-page booklet, "Ich Koche Mit Honig" (I cook with honey), by Frau Frida Aisch, of Ketschendorf-Spree, Germany. The booklet is very comprehensive and deals with manners of cooking with honey in soups, vegetable dishes, meats, fish, salads, cereal dishes, cold desserts, baked goods and candies. There are not a large number of recipes, but apparently they are quality ones.

The American Bee Journal is referring the booklet to the American Honey Institute, thinking perhaps there may be some recipes therein which they do not have.



E. L. Hofmann finds bees pay best

The Bees Pay Best

Minnesota Man Says That for Twenty-Year Period the Bees Have Given Better Returns Than Dairy, Poultry or Hogs.



By Frank C. Pellett

IN these days of vanishing profits, when everything seems to turn out wrong, it is interesting to get the viewpoint of an extensive beekeeper who is also an extensive farmer. E. L. Hofmann, of Janesville, Minnesota, is such a man. Hofmann has about a thousand hives of bees. He also milks twenty cows and has recently sold three carloads of hogs which he raised on his hundred-acre farm. About a thousand chickens are raised each year as a sideline.

With the background of many years of successful farming experience, Mr. Hofmann is well qualified to make comparison as to the relative profits of honey production with other branches of farming.

When asked as to comparative returns, he stated that the bees had been the most profitable branch of his farming for all but three years of the past twenty. In the years 1915, 1917 and 1919 the apiary failed to show up as well, relatively, as other lines.

In figuring the profits he considered the net return after deducting overhead expenses, such as cost of equipment, depreciation, etc., and necessary labor. He stated that while the dairy gives a constant and dependable income, it is relatively more expensive to operate, because, in addition to the investment in the cows, it requires also a large investment in land and buildings to house and feed them. In speaking of the hogs he reminded the writer that these animals require concentrated feed and do not consume the rough-

age as do the cattle. They remove too much of the soil fertility and thus add a heavy charge over a series of years because they fail to return a sufficient amount of waste back to the soil in the form of manure.

With the bees there is no charge for pasture, no waste of soil fertility, and a relatively small investment in equipment. While most crops which the farmer sells make some demand upon a capital investment in the form of soil fertility permanently removed, the bees gather what would otherwise be a waste product and make a net addition to the wealth of the community. Other crops profit also because of increased yields from better pollination because of the bees' visits. For these reasons he finds the bees to be the most profitable branch of his farming.

Mr. Hofmann was the first farmer to grow alsike clover in his neighborhood, sowing the field in 1906. Since that time alsike clover for seed has become an important crop in his locality. Now he has become enthusiastic about sweet clover and is including it in his farm operations and hopes that neighbors will likewise find it profitable.

The dry weather of the past two summers, which greatly reduced the bee pasture in his immediate neighborhood, compelled some changes in his system of bee management. Finding the alsike insufficient to provide a profitable crop, he sought out locations where sweet clover was abundant, to which the bees might be

moved at the end of the alsike flow. In one such locality 105 colonies harvested 27,000 pounds of sweet clover honey in twenty days. The best colony brought in 500 pounds.

Hofmann is a believer in the big hive, and some years ago changed from Langstroth equipment to the Dadant hive because he was convinced that he could get more honey with less labor in the large hives. He is a believer in having plenty of equipment to take advantage of the crop, and counts on two bodies and four supers for every colony of bees. As soon as the bees are taken from the cellar in spring they are given a shallow super filled with honey, which is placed underneath the hive. Since the bees dislike to have honey stored under the brood nest, they begin moving it upward, and this furnishes a real stimulation to the colony. Brood rearing progresses rapidly and soon the hive is getting crowded. A second deep body is then given to provide the queen with all the room she can possibly use. Two Dadant hive bodies is room enough to rear a big working force, and with the super of honey below he soon has wonderful colonies. With such colonies at the start of the honeyflow, he is assured a good crop in even a moderate season.

As a result of his experience in moving to the sweet clover, he is planning to make that a regular part of his operation. He now takes a single frame of brood to establish a new colony in spring. To each

(Turn to page 159)



Trade Restrictions

There is every indication that we must rebuild our shattered business fabric along new lines. We must depend more and more upon the home market in future. Trade restrictions of one kind and another are hampering the exchange of goods between countries until the volume of export trade bids fair to be permanently reduced.

The Canadian tariff has compelled many American manufacturers to build factories in Canada or lose their business in that country. The investment by American firms in Canadian factories thus runs into billions of dollars. The result is that workmen in this country who were formerly employed in making the goods for the Canadian trade are permanently displaced.

A late news dispatch states that France has lately placed an embargo against American fruit which will shut out millions of dollars' worth of our fruit from the French market. Thus every country seems bent on shutting every other from its markets and in turn loses the benefit of sales to the foreigner. Tariffs and embargoes cut both ways and when shutting out the seller close the door to the buyer as well.

American beekeepers may well plan to go back to the old way of building a home market for their product. We must depend more and more upon our neighbors for our markets. We have no fear but that enough honey can be sold to provide reasonable prosperity for the honey producer, but it will require more effort in selling than in days gone by.

Hauling Bees

April is the month when we are likely to make the largest number of changes in our location of apiaries. When transporting old hives with bees it sometimes happens that a hive will leak where it is least expected. A good way to stop the bees from coming out is to fill the opening with cotton batting. This would not do as a permanent closing, but is splendid while you are on the way, for the cotton batting may be fitted to any opening and is immediately efficient. We have often had trouble with old hives leaking bees and it is very useful to be able to put a stop to their exit at once.

When you move the bees short distances, it is well to give them considerable shaking in order to make them examine the new spot. Otherwise many of them might return to the old spot.

Uses of Honey

We have repeatedly urged our readers to recommend the use of honey in diet. The Quebec magazine "L'Abeille et l'Erable," in its February number, contains a long article on honey as diet for children. It reports that there is nothing better than honey to keep children healthy, that constipation in little children is fought most successfully with from one to two teaspoonfuls of honey. In a question addressed to Dr. M. W. O'Gorman, director of a child's institute, as to whether it was not advisable to give castor oil to little children when they suffered from constipation, he replied that castor oil was

good to lubricate aeroplane machinery, but that honey was better for the children.

In addition to the direct consumption of honey, candy manufacturers are coming to use it in larger numbers than ever. A letter from the Hershey Chocolate Company, makers of the Hershey Honey Bar, indicates the use of large quantities of honey every year. There are over thirty manufacturers of candy in the United States using honey.

The number of bakeries using honey is increasing rapidly, due to the efforts of the Institute to familiarize bakers with what honey will do for them.

A most unique use of honey is suggested by a manufacturer of printing rolls, experimenting with honey in an effort to produce a smoother roller, which carries ink better than rolls now used.

So there are a number of outlets for honey which may be developed with great benefit, and it is quite likely that there are other contacts undiscovered. It surely looks as though the day of recognition for our product is coming rapidly.

The Grey Bees

Great interest has been manifested of late in the grey bees of Europe. In a recent article in the Australasian Beekeeper, A. Z. Abushady writes that he has come to the conclusion that, in Egypt, Carniolans stand supreme in the desirable qualities for honeybees. In view of the warm climate of that country it is rather surprising to hear that a race of bees coming from a cold region is superior to races long adapted to mild conditions.

In his classification of bees he limits the term "black" to Tunisians; "brown" to the bees from England and Central Europe, which in this country are usually spoken of as "black bees." It appears that interest in the grey races is world wide at the present time and that the bee men of Australia are as much interested in learning more about them as are the beekeepers of America and of Egypt.

Many years ago there was similar interest in the various races of bees, but here in America the Italians soon became general favorites because of the fact that the markings are such as to make it easy to recognize impure and mismated stock. At the same time they have proved to be good performers when it came to bringing in the harvest.

Don't Let Your Bees Starve

Not long ago a beekeeper came to us and wanted us to tell him why his bees died. Did they have any disease?

We went and looked at his fifteen colonies, with him. They had starved to death—did not have a single cell of honey left.

"Why," said he, "I left them with plenty of honey in the fall. I had no idea that they might be short." Well, in an ordinary season they probably would have had enough. But we had warm weather in January and February and they reared lots of brood. Then it turned cold and remained cold. They consumed what honey they had to feed their brood and then starved.

Don't let your bees suffer for want of food at the end of winter. We have seen bees actually starve to death, even as late as the middle of June, before the clover crop, when the weather was unfavorable. It is important for the beekeeper to watch his colonies till the crop is on. It is a pity to leave them enough honey to pass through the winter and then starve at the end of it when a little food would have helped them to the harvest.

Look after them.

The German Tariff

The January number of the Bee Kingdom has an interesting review of the workings of the German tariff on honey. In 1929 imports from the United States amounted to 2000 tons. In 1931 the amount had fallen to 325 tons as a result of the high tariff. This was disastrous to the American beekeeper, but according to the article quoted the results were disappointing to the German beekeeper, for instead of increasing the local price as they had hoped, prices continued to fall until they are now nearly 50 per cent lower than the 1929 levels.

Tariffs which place too high a discrimination against a foreign competitor usually result in disappointment. While a high tariff may shut out a competing product, it also discourages trade to such an extent that prices are likely to fall as a result. When demand is brisk, trade thrives and prices tend to rise. Anything which restricts trade and slows down demand has the opposite effect. The whole world is getting a real taste of high tariff and nobody is pleased with the result.

The Editor's Answers

The Question Box, or Editor's Answers, is intended to reply to questions which are not easily found in bee books or that may not have been raised in bee books at all. But it is not intended to give a detail of all manipulations, for there would be no limit to the answers that would be required.

For instance, a beekeeper writes: "I am a beginner and do not know how to make divisions. Please give us all details concerning the making of divisions." An answer to this request would require a chapter in a bee book. It is to be assumed that a beginner secures a book on beekeeping and reads it before he asks questions. If there is anything he does not comprehend, this is a very good excuse for a question. But the general information on beekeeping must be sought in bee books.

Spraying Fruit Trees

The time will soon be on hand, and is perhaps on hand already in some of our middle states, to spray the fruit trees to destroy the insects that damage our fruit. But we must remember that if we spray at the wrong time we will injure our bees, which have been proven so useful to the fertilization of fruits.

When, then, is the best time to spray fruit trees? Just before and especially just after the bloom. The codling-moth and other fruit feeders enter the fruit after it is formed and the spraying of the blossom only serves to injure the latter in its fertilization.

It is therefore of great importance that our farmers and fruit growers be informed of the necessity of spraying only at such times as the blossoms will not be injured. We save our fruit and spare the bees that are doing the fertilizing by going from one blossom to another. In some varieties of fruit, such as the Kiefer pears, which are self-sterile, it is important not only that the trees should have, in the immediate neighborhood, some pollen-producing trees, but also that the bees should be enabled to go from the one to the other during the bloom. But the bees can do nothing if poison is used on the blossoms.

Opportunity

The prospects for a honey crop are the best in several years. There is a very large area which has suffered from severe drouth for the two past seasons which now is well supplied with moisture. Reports indicate that the honey plants are coming through the winter in very good condition and there is every reason to hope for a bumper crop of honey this year.

Now is the time for the beekeeper to fill every empty hive with bees and get ready for the harvest when it comes. Prices of honey may be low, but so are the prices of the things the beekeeper must buy. Again, honey will keep. It is not necessary to turn it into cash the day it comes from the hives, as is the case with berries or other perishable crops.

Package bees and queens are selling at very low prices and equipment is lower than for many years. There is every reason why the beekeeper should take advantage of the present favorable conditions to improve his position.

There is something strange about the trend of human activities. When prices were high and a hive of bees would sell for as much as a cow would now, everybody wanted bees at any price. Now that prices are low and a man can establish an outfit for a very small price, bees go begging for buyers. It is interesting to note, however, that the men who have made large success in the business of honey production are getting ready to expand this season. When a crop is in sight is the time to get ready for it, and especially is this true when it can be done at such a small cost as is the case right now. The editor of this magazine once kept extracted honey in barrels for several years when the price was low and the demand poor. Finally he sold it at a price which returned a fair profit.

Government Meddling

The Australian bee magazines are filled with letters of comment on their marketing board. When the prices of honey began to fall some time back, Australian beekeepers decided that the government should do something about it. They asked that a board be appointed with full authority to handle all the honey. Now that they have what they thought they wanted, they do not want it. The law provided that no beekeeper could sell any honey except through the board. Now we hear complaints that beekeepers are prosecuted for selling their own honey for higher prices than the board could get for them, that those who have shipped their honey to the board are waiting in vain for a remittance, and that the beekeepers have lost many thousands of dollars as a result of government interference with their business.

We hear the same story everywhere. Here, in America, farmers clamored for the Government to save them from falling prices of farm products. The Farm Board was established with a fund of five hundred millions of dollars to handle the crops. Then came the lowest prices for wheat in three hundred years, the Government holding an enormous volume of wheat, the farmers near ruin and the taxpayers threatened with higher taxes to pay the cost. We never seem to learn anything from the experience of others. The fact that Brazil had been unable to stabilize the price of coffee, Great Britain the price of rubber, and numerous other attempts had resulted in failure, meant nothing to us. We had to bump our own heads on the same stone wall.

Whenever government interferes with private business it always proves costly. It is easy to get a government commission saddled on our necks, but hard to get rid of it.

Salt for Bees

We used to give salt water to our bees. Of late years we have neglected it. Here is a proof that they enjoy it:

The March "Bee World," published in England by Annie D. Betts, in its March number, page 35, contains an article by Mrs. M. M. Hooper, recommending the use of salt water:

"I thought it wise to ask the bees what they thought about salt. Two similar earthenware jam pots were filled with water from the same tap, to one was added common salt, about a quarter ounce to half a gallon of water; the pots were inverted on dinner plates to form a very common kind of water fountain for the bees. The two pots were placed as nearly as possible in the same place . . . Always the bees crowded around the salted water and almost completely neglected the unsalted supply. The pots were constantly changed about and it was funny to see the bewilderment of the bees who made for the same spot only to find something lacking. When once the change of position had been discovered, the same difference in number of bees at the respective spots was in evidence."

The above shows us that, whatever may be the actual good done by salt, it is evident that bees prefer salt water to clear water.



EUGENE S. MILLER

THERE are numerous ways of handling bees in the production of comb and extracted honey. In the last thirty years I have done much experimenting and have tried out many of the other fellow's schemes and many of my own. Most of the so-called methods have not proved satisfactory, either requiring too much labor or being too complicated, or they just wouldn't work.

It is my desire in this article to present a method of comb honey production both simple in operation and effective in producing results. In fact, I believe it to be the most practical of any yet devised. I will assume that we are in the white clover belt, that standard hives and equipment are to be used, that in early spring the bees are in one-

A Plan of Management for Comb Honey Production

By E. S. Miller
Indiana



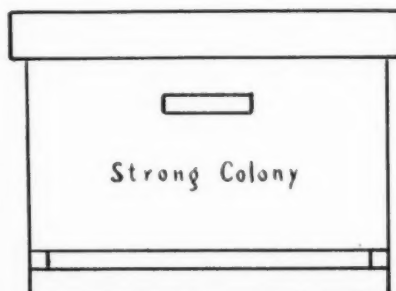
A Master at the art of producing comb honey, Mr. Miller is also a close observer. This is a simple plan, well established, and we recommend it.

story hives, and that the colonies are reasonably strong.

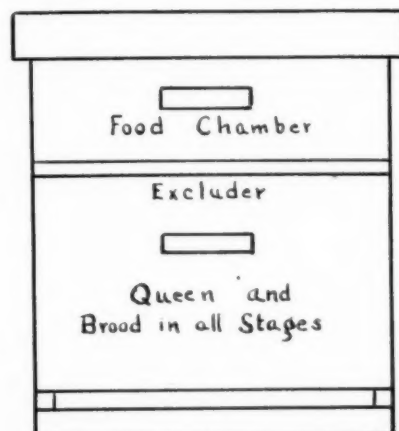
First. About the beginning of fruit bloom, place on the hive a queen excluder and a super partly filled with combs of honey. This serves as a sort of safety valve, obviating any danger of starvation between fruit bloom and clover and furnishing room for storage in case a considerable quantity of nectar

comes in. It also tends to discourage swarming, since the bees are given more room.

Second. A few days before the beginning of the flow from alsike



April 1



May 1



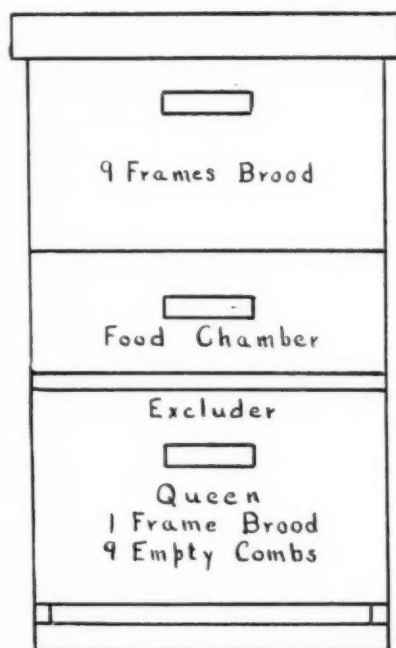
One of the Miller yards

and white clover, say about the time when the first clover blossoms appear, replace all but one comb of brood with empty drawn combs, removing to the top or third story the brood thus withdrawn (Demaree plan). If one is working for extracted honey, no other manipulation is necessary except to remove queen-cells ten days later.

Third. For comb honey, ten days after the second operation, place the third story down on the bottom board, destroy queen-cells and add one or more section supers, according to the strength of the colony and the prospect for a honeyflow. Shake off most of the bees from the unsealed brood and from the food chamber, both of which may now be moved to a new location and given a ripe queen-cell or may be used to strengthen a weaker colony. Intro-



Miller yard near Valparaiso, Indiana

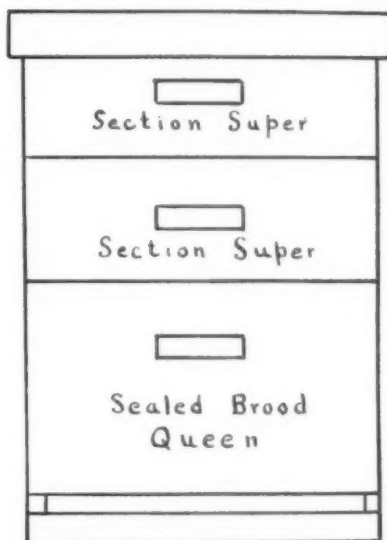


June 1

duce in the comb honey hive a young laying queen. If a young queen is not available, use the old queen, but unless requeened swarming may occur later when the combs are again filled with brood. I do not advise giving a queen-cell or virgin, as they frequently disappear, leaving the colony queenless. If the colony is not deemed sufficiently strong, two or more adjacent colonies may be shaken together, but they must be well smoked and drummed to prevent fighting.

One advantage of the plan is that nearly all of the working force of bees is left with the parent colony and for eleven days brood will be emerging to add to this force, giving room for the queen to deposit eggs. There are no larvæ from which to start queen-cells, and there will be little tendency to swarm if the work

is done before the bees acquire the swarming fever. In case alsike and white clover are followed by sweet



June 10

clover or other nectar-bearing flowers, further manipulation may be necessary later in the season.

I do not claim that the method is infallible. The poet Burns has said that—

The best laid schemes o' mice an' men
Gang aft a-gley.

And this is especially true in beekeeping. I believe, also, that it was Dr. C. C. Miller who said that bees do nothing invariably, which is not quite the same as to say they invariably do nothing. I have known seasons when every colony in the yard seemed determined to swarm between fruit bloom and clover when no nectar was coming in and hadn't been for two weeks. There have been other years when swarming occurred even before trees were in blossom and it was found necessary to "oper-

ate" to prevent the bees from leaving for parts unknown. There is no system or method of handling bees that is proof against failure, but I believe that the one outlined above comes nearer to giving results than any other yet devised. The beekeeper who succeeds must vary his practice to suit varying conditions due to location and season and be constantly alert and watching for abnormal conditions. Thus, for example, if white clover and alsike fail, or if for any reason the main honeyflow comes later in the season, then the second and third steps in the above program must be delayed until the opportune time.

Package Bees to Canada Excepted from Dumping Tax

Canadian purchasers of package bees may pay for them in Canadian currency without coming under the dumping act. The latter provides that a tax the amount of the current rate of exchange be levied on goods received from across the line when paid for in Canadian funds. Exceptions have been made, however, in the case of products which are not made in Canada. Since package bees are particularly a product of southern United States, exception has been made, so shippers need have no fear of coming under the provision of the dumping act, and Canadian buyers need have no fear of bees so purchased being taxed nor of any delay at the customs office.

Last year prepaid shipments ran into trouble at the Canadian border and a special duty was imposed on prepaid shipments.

This matter, too, is covered in the declaration. The letter sent out to the collectors reads thus:

"From information before the department, package bees and queen-bees are of a class or kind at present not produced in Canada, and accordingly importations would be exempt from special or dumping duty."

Another New Yorker Goes South

Roy E. Meeker, of Sherbourne, New York, has been down to South Carolina and located near Allendale with several hundred colonies of bees which he intends to transfer and increase until he has about seven hundred colonies. Later they are to be shipped back to New York State.

That is a good way to get into beekeeping these days, because bees may be bought cheaply oftentimes and shipped after transfer and an early crop further south.



Bees in the Brood Nest, the Cause of Swarming

By George S. Demuth, Editor,
Gleanings in Bee Culture



IN your January number both Jes Dalton and Frank C. Pellett refer to me as saying that a honey-bound brood chamber is the cause of swarming. This is attributing to me a statement which I have not made and which is contrary to my convictions regarding the cause of swarming. The article in question was taken from a letter which I had written on this subject to my good friend Mr. Cale, and I thought it unnecessary to specify that by "congestion" in the brood chamber I mean congestion of bees, not a honey-bound brood chamber. It never occurred to me that anyone could interpret my statements the other way.

The honey-bound colonies which Mr. Dalton mentioned as having only a small patch of brood in each of three frames certainly were in no condition to swarm, but those same colonies the next spring were in the right condition to swarm because they had a large proportion of young bees, too young to work in the supers or in the field, and in addition a great hoard of field workers crowded in the brood chamber during showery weather, waiting for a signal to go out to the field. Such a condition is highly conducive to swarming. It is exactly these conditions that result in seasons of excessive swarming in the clover region. Sometimes it is caused by showery weather driving the field workers in at intervals for several days, and sometimes by erratic nectar secretion, the flowers yielding during only a part of the day.

This explains why there is much less trouble from swarming in the intermountain region and some of the plains states, where there is less rain and where nectar secretion is less erratic than in the East. Also, in the sweet clover and alfalfa regions the bees apparently have to spend more time in the fields to obtain a load of nectar than they do

during a good honeyflow from white and alsike clover in the East, so the hives appear almost deserted of field bees during the heat of the day.

Mr. Pellett asks why bees often give up swarming during a good honeyflow. This is because field bees then spend so much time in the field when the honeyflow is constant and the weather is favorable that there is no congestion in the brood nest. Last season, in my own apiaries, when bees left alsike, which yielded heavily during only part of the day, and began on sweet clover, which yielded all day and which apparently required more searching, the hives suddenly appeared to be almost deserted, most of the bees being in the fields. They immediately gave up all attempts to swarm, and those which had started queen-cells tore them down.

The swarming season usually occurs at the time of the greatest percentage of young bees, at the climax of the spring building-up period. By skillful management this excess of young bees can be induced to move up into the supers, relieving the congestion in the brood nest so that no swarming results, but if the field bees stay home and crowd into the brood chamber, as they often do when the nectar flow is erratic, and they expect to go to the fields any minute, swarming is almost sure to occur if this condition lasts for several days.

In my experiments to determine the cause of swarming, I have repeatedly caused colonies to swarm whenever I wished, other conditions being favorable, simply by adding a few pounds of young bees in the brood chamber. Also, in hundreds of cases, I have induced colonies preparing to swarm to give it up simply by taking away a few pounds of young bees.

Congestion of bees in the brood nest, I have found, is the one factor

always present in normal swarming, whether brought about by a congestion of young bees in the brood nest because of faulty distribution in the hive, or by field bees crowded into the brood chamber at intervals during an erratic honeyflow.

If there is a single question about the behavior of bees that has been answered to my satisfaction, it is that of the cause of swarming. In all my experiments the answer has been the same. And it is the result of these experiments, extending over many years, that prompts me to speak with such confidence.

Mother's Day Plans

Plans for a nation-wide Mother's Day campaign to obtain better maternity care for expectant mothers are taking concrete form among women's clubs, church and civic organizations, health departments, medical societies and nursing groups, according to details which have been made public by the Maternity Center Association, 1 East Fifty-seventh Street, New York City.

Last year the campaign sponsored by the association voiced an indignant protest against the high maternity death rate in this country, and demanded America provide its mothers with more adequate maternity care, by means of which, authorities maintain, 10,000 of the 16,000 mothers who die annually in childbirth could be saved.

Mrs. John Sloane, president of the Maternity Center Association, in a recent letter expresses surprise that the campaign last year interested fully as many men as women, and indicated that special efforts are to be made in 1932 to awaken prospective fathers to the fact that a well baby and a healthy mother require more than simply to let nature take its course.

"The Maternity Center Association," states Mrs. Sloane, "will be

glad to help local organizations everywhere to call the attention of their communities to the vital need for adequate maternity care. Mother's Day is Sunday, May 8. Material for speeches, programs for women's clubs, outlines for church services, and other helps for local campaigns are available free of charge to anyone interested in improving conditions in their locality."

Canned Heat for Fastening Foundation

"Canned Heat," a solidified alcohol fuel which comes in 10-cent cans, is handy for heating a spur wire embedder or the wall-scraper type of foundation fastener. I used it with satisfaction last Summer in an out-apiary where no other form of heat was available.

S. F. Haxton,
Pennsylvania.

Which Is Hazel?



Whenever I hear the name of Hazel V. Bonkemeyer, of North Carolina, I think of the lady in the picture, but, 'taint so. Hazel is the man of the family. Our field editor has visited with him and his wife and assures us that she is not Hazel, but he is.

About 1914 Hazel V. Bonkemeyer began beekeeping and has been at it continuously ever since, except for two years in the war. Fourteen years he has been rearing queens, with his wife as an able assistant. In writing, Mr. Bonkemeyer says: "I don't want to forget to tell you that my wife makes all my queen cage candy. She is as much a lover of the bees as I am and helps me in the queen yard and can do anything with the bees, although so far she has not tried to graft cells."

An Ideal Installation for Package Bees

By Robert Mead
Vermont

I NOTICE that a new set of beginners pop up each season to ask of some bee magazine "if package bees installed in the spring can be built up to full strength for the honeyflow." The answers generally indicate they can if sufficient time elapses between the arrival of the bees and the beginning of the main flow. That is quite true, but is often further complicated by the beginner wishing to use just sheets of foundation in his frames instead of drawn combs. The small clusters that make up a package are seriously hampered in their work if required to draw combs, so that in many instances it will be during the main flow that they get to full strength rather than at its beginning, so that one can hardly expect a full crop from them.

However, I found that a two-pound package installed on combs that had been drawn the previous season and about one-half filled with honey would build up fully as well as the average wintered-over colony. A few years ago, when honey was high priced and selling well, the temptation was to extract every drop possible, so that very little was left for this purpose. But now it seems that at least for the darker or stronger grades this was an ideal use. One making a beginning could start with a few colonies and probably get enough full-depth supers started to make a 100 per cent increase the following spring. Or if located near a large apiarist a deal could be made for what full-depth supers were needed. These should be reasonable in price, as the honey may be of a low grade. It would be very necessary, of course, to use all possible precautions to get combs free from foulbrood of any variety.

Once the full-depth supers are obtained, all that is necessary to complete the hives are tops and bottoms, which can be bought separately from a supply house if desired.

Packages to be placed in such hives can safely be ordered two weeks earlier than those that would be placed on foundation. Once hived, the bees rapidly prepare cells for the queen to lay in and with plenty of honey right there for food everything goes ahead with a boom. Needless to mention the combs should contain a preponderance of good worker-cells.

One interesting feature of this which students of the insects may wish to study more extensively is the behavior of field bees from such hives. From watching field bees here several springs from hives prepared with drawn combs and honey in contrast to those prepared only with

foundation, I arrived at the conclusion that where there was plenty of stores already in the hive the field bees from that colony devoted themselves more to gathering pollen, while those from the hive having only foundation devoted themselves more to gathering what little nectar was available. This was arrived at by counting the incoming bees of a colony prepared in each manner and of comparable strength and noting the number of incoming bees in each instance that were pollen carriers. Later in the season, when the colony on foundation had most of its combs drawn, no such difference could be found.

In localities having a heavy early flow from dandelion or fruit bloom, putting packages on combs already containing stores may result in a slight temporarily crowded condition, but as a dearth of honey usually follows this early flow all the stores will usually be used up by the main flow.

In Reference to "Why Say Just Honey?" February, Page 63

The author, E. F. Lane, of California, calls our attention to the fact that in revising his manuscript of this article he intended to convey the idea that "Most recipes say 'just honey.' Would it not be better to mention clover honey or many of the table grades? The itinerant honey peddler has driven more people from using honey than he has created honey users."

As we now understand it, Mr. Lane believes that in giving recipes for honey the recipes should include the kind of honey to be used to prevent misfortune. We believe he is right. A recipe developed around clover honey will not be the same if buckwheat honey is used. There is no arguing that. So when the recipe calls for honey the housewife will very likely use a honey which will not work unless the kind of honey is specified in the recipe itself.

Bees Rout Lerayville Marauders

Irving Bachellor's novel, "D'Ri and I," narrates that during the war of 1812 English soldiers pounced on a castle owned by rich Frenchmen who were also beekeepers, located near Lerayville, New York, named after the French family Leray.

Before the soldiers could get started in their pillage the old beekeeper let loose the bees, and the way they stung the men and horses was laughable to those on the inside. There was no pillaging. The gang was glad to get away.

J. M. Dillon.

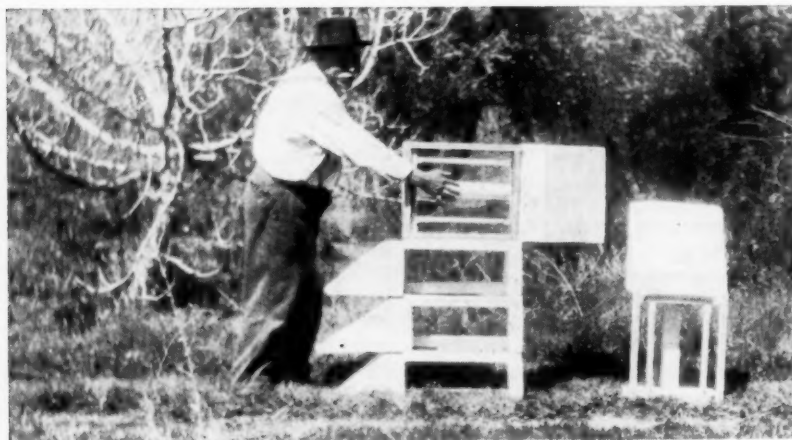


A near view of a row of Yarnell's hives, all with glass bottoms.

Raising My Production With Glass-Bottomed Hives

By John E. Yarnell
California

John Yarnell tells his own experience. Applaud it or condemn it—what experience have you? There will be some hives in our yards this year with glass bottoms.



Upper picture: Mr. Yarnell shows how the bottoms look when ready for use.

Lower picture: Yarnell's apiary on Paradise Mountain. The first row has glass bottomed hives.

UP to my fifty-eighth year, I had always lived in the city, but when prospective employers began to take more notice of gray hairs than of letters of recommendation, it became necessary to change our way of living. So that year I landed on a farm and started over again, to learn about chickens and bees.

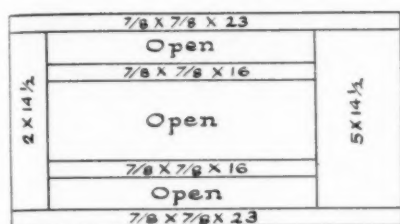
In a paper read at a San Diego bee-men's convention, it was stated that a man could come into San Diego County with \$400, buy an apiary and make \$1000.00 a year. I have since satisfied myself that he used the word "possible" entirely on purpose and never thought of using "probable." I read articles telling how much honey a colony of bees would produce. To me it seemed that an apiary would be just the thing, so I bought 23 nine-frame colonies in 1926. At the end of the year I had

38 colonies and about 30 pounds of honey per colony, spring count.

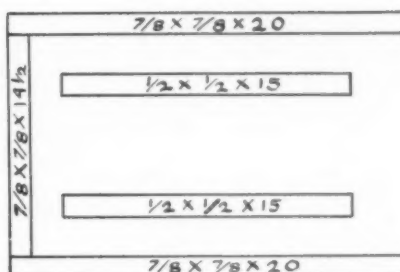
I found out that no matter what bees did for others, they fell much short of 200 pounds per colony for me. About this time it was brought to my attention that the average yield of honey per colony for San Diego County was about 30 pounds to the colony and that the average for California as a whole was only 40 pounds to the colony. This slightly jarred me as I had never heard any one bragging about it before, but I was in over my head and couldn't get out. 1927 found me with 67 colonies of bees and about 900 pounds of honey.

I also found that I was running the apiary for swarms instead of honey and there was no money in that. I read all the bee literature I could get and decided that larger hives was the way out. So in 1928 I began putting





Plan of bottomboard. The frame may be covered with transparent celluloid. The beeway is put on afterwards.



Top of the bottomboard, with edges for the hive and center pieces or beeway, so bees can make a stairway to their frames.

in large Jumbo hives. But 1928 brought a honey failure.

By 1929 my colonies had been reduced to 50, 30 of them in large hives, and I extracted 60 pounds per colony. I started 1930 with 35 large hives, nine 9-frame hives and six 10-frame, and extracted 120 pounds per colony. In the spring, as I sat looking at the heavy swarms and wondering what kind of a job the bee traffic cops must have in those big dark hives and knowing that direct light and sun would not do, I figured that perhaps light thrown through the bottom of the hive might help.

I had glass which I put in the bottom of six different hives and raised these hives four inches off the ground. That seemed to be just what was wanted. Two of these hives produced over 200 pounds each which was more than nine of the original nine-frame hives sitting along the side produced. The latter stayed with the old average of about 30 pounds. The last week in April of this year it started to rain and continued to rain and fog until the middle of May. I had to feed but I did not lose any bees. The 50 colonies produced for the season 5,000 pounds.

Also, I began to use queen excluders, thinking the large hive gave the queen plenty of room, but not so. The last week in June one of the big Jumbos swarmed. The first week in July another swarmed completely filling one 10-frame and one 9-frame hive, some bees not being able to get in.

In 1931, I put in 27 additional window bottoms, 33 in all, but used celluloid such as is used in automobile window curtains, which is clear like glass and will not break. To make the bottom I cut out everything I can, like the diagram shows, cover it with celluloid, then I put on a 13/16 inch piece for a beeway, and I place pieces on the sides so the bees can get up to the bottom of the frames. On the old wooden bottomboard there would be piles of propolis so the bees could reach the frames, but so far they have not allowed propolis on the window bottoms. Brood is also placed way down in the bottom row of cells of the comb, and honey, if any, at the top.

1931 opened nicely with wild buckwheat and sage looking as though

there would be a record yield when dry weather struck us and everything went. However, the two best window bottom hives beat the two best large hives, with wooden bottoms, about 75 pounds each. What proportion of results are due to the size of the hive and what to the bottom I can't say.

My hive bottoms are now raised about eight inches from the ground. I do not have the swarms, perhaps due to the seasons. My apiary is in the mountains with no cultivated sources of nectar and I find that my colonies with window bottoms do not need requeening. I see no reason to modify this statement although some have taken exception to it.

The old apiary which I bought contained hives put together with cut iron nails, showing them to be nearly fifty years old, but I am satisfied there had never been a queen introduced and there certainly have been no queens introduced since they came into my possession. My bees are a mixture, I think, of about everything with the possible exception of the stingless bee.

I am satisfied that with Jumbo or Dadant hives, and window bottoms, the bees will see that the queen is young and vigorous. I do not think a hive so equipped will need requeening. Look at my apiary and you will be convinced. Last April when the deputy inspector examined them he called them "the best in the county." From a common start, five years of better housing placed these colonies in the front rank, while those left in the old equipment were just where they were at the start.

Tub of Honey in Tree

This is a clipping taken from the St. Louis (Missouri) Globe-Democrat, Sunday, December 6, and concerns the finding of a half barrel of honey suspended from a limb on a tree on the farm of Morton Trice, west of Columbia. The honey was in eight combs and was safely hidden until foliage on the tree was destroyed by frost.

Fred H. May, Illinois.

Making a Market

By Luella B. Lyons
Illinois

In southern Indiana, I have just had the good fortune to meet a professional bee man who asks and gets 5 to 7 cents more a pound for his honey simply because he has created such an interest in the product, and because of his work for the community they feel obligated to pay more and like it.

The day I called upon him, he was taking time off to judge some eight hundred pictures, all free-hand drawings made of bees, the work of the school children in town. Each drawing was accompanied by one hundred words telling how he or she thought "the regular use of honey in the diet," the teachers having explained just what was meant. The children had read books, asked parents, and had visited the bee farm.

In a corner of this gentleman's office I saw a parcel post package unwrapped, and there on cards I saw tiny bees made on pins. "I furnish the pins for every new member of my bee club," he explained. I asked if I might join and he replied, "Providing you adhere to the initiatory rules—bring me your mother's or guardian's best recipe that has honey for one ingredient, and you promise that you will try to consume not less than one cupful of honey per month." I promised then and there, and as for the recipe, I knew one by heart—honey-biscuit shortcake.

He confided that all the recipes were going into a honey recipe book a little later on, and I made sure to put my bid in early for a copy.

The moment my business with this hustler was finished, he carted me (or should I say he flattered me?) into town, where the food class was having a honey exhibit and market. Proud mothers and fathers were there sampling some of the exhibits, while the fathers did the bidding at the auction. The money thus derived was turned over to the public charity, but he could well afford to do so, for he had furnished the class with all the honey used in the pies, candies, cookies, cakes, and what-not.

"The bees haven't heard of the depression and I keep them buzzing so they won't hear humans wailing about it. And, as for my market for it, depression hasn't touched, for I make my own market for all I can bring into town. I have no trouble moving the crop right along for cash every time. They just won't charge their 'honey'—funny that way, folks be," he teased.



Mr. and Mrs. Merritt C. Cook, look ahead together with courage and decide to stick to the bees.

My Four-Year Record Gives Me Confidence in Beekeeping

By Merritt C. Cook
Nebraska

"Shoemaker, stick to your last." Beekeeper, stick to your bees. We're all 'down here' together, why look for something better when what we've got—is better?



THE years have come and gone with their new problems and varying fortunes, and they have left me with more confidence in the opportunities in beekeeping and a much greater appreciation of the need of experience.

This has been my fourth year on a commercial scale. I have kept records to tell whether I am traveling in the right direction in the choice of a business and its management thereafter. I know just how much it costs to produce Nebraska honey, as during two of these years the records were kept in such detail that I knew the actual hours spent on all the different operations.

During those two years (1928-29) I allowed myself 40 cents an hour for time spent with the bees and 30 cents for assembling supplies. Under present conditions this is too much. Also, I have been giving myself 7 per cent interest on investment after depreciation had been deducted from income, which is a far greater return than I would have, had my money been invested in stocks or real estate. I have been taking 10 per cent depreciation on equipment yearly, but in a few years this will be greatly reduced as the new wears off the most of the equipment. I am mentioning these items to show that the cost per pound production figures that follow are calculated on a high cost basis.

My 1928 spring count was 75 colonies. Since then, from time to time, 60 colonies in hives and 380 packages have been added, besides increase by division. However, the reductions of package failure, winter

loss, uniting the weak and queenless, killing all diseased colonies found in summer and fall, and spray poisoning have held the total down to 365, fall count 1931. However, the new inspection law and more normal weather conditions will greatly reduce future charges for colony depreciation.

A summary written at the close of 1928 will serve to illustrate the ordinary run of weather and colony condition as I find it in my immediate vicinity. I am located near the junction of the Elkhorn, Platte and Missouri valleys, and as a result the weather is variable, with a great difference in rainfall, even among outyards.

The season of 1928 started with a typical Nebraska spring—warm enough to open and inspect colonies on the eleventh of March, and a blizzard in apple blossom time, the last week in April. (Last February a beekeeper north of me had as high as 175 pounds of maple nectar per hive, and one to the south had an outyard starving late in July!)

Upon first inspection the Modified Dadant hives were the strongest in bees, brood and honey, and those without packing practically as far along as those that were packed with tar paper and straw.

The best colony found had no packing and had brood on five combs. A nice stimulating flow continued until dry weather, around the twentieth of May, and thereafter many colonies that had a good supply of honey in March were completely out and had to be fed until the drouth was broken in June. About the twen-

tieth of June, surplus storing started and was at its best the first week in July, declining from then until the first week in August, when hot winds and drouth brought everything to a standstill for three weeks.

Had the weather been favorable during this time, the crop total would have been at least 50 per cent greater. Belated rains brought a stimulating flow that stocked the brood chambers and started brood rearing, thereby permitting the replacement of old queens with a high average acceptance.



The author is sure that colonies with shoulder high crops are not so bad after all.



Mr. Cook in his apiary. For him the bees still mean an independent life.

Under these seasonal conditions the 165 colonies, 100 Modified Dadant, 50 ten-frame and 15 eight-frame hives, in three locations, produced an average of 113 pounds per colony, approximately 12,000 pounds of extracted, 6,000 pounds of chunk, and 1,000 pounds of section honey.

Fifteen hundred pounds of this were sold locally, the balance being sold wholesale, with cans, cases and supers returned. The average price for 1928 was 8.36 cents per pound, with a cost of production of 3.66 cents per pound.

The following items contribute to the cost:

Interest on investment at 7 per cent	\$106.40
Interest on investment in new goods, nine months at 8 per cent	95.70
Labor	250.20
Auto expenses and truck bills	110.10
Depreciation on equipment	55.00
New queens	39.00
Yard rentals and taxes	24.00
Container costs and depreciation	20.00
Total	\$700.40

Nineteen and twenty nine shows a production cost of 5.3 cents per pound on a 92-pound average, and 1930 a 4.5 cent cost on a 163-pound average. In both instances the depreciation item alone ran over 1½ cents per pound on the cost. I believe I can produce honey at 3 cents per pound over a period of years and make a fair living, with a little to spare in the good years.

In my opinion, the Modified Dadant hive is the only one for the commercial man under the conditions in my vicinity. It is not suitable for the careless or ignorant beekeeper, but if its requirements are met it cannot be beat for highest yield with the least labor. Its main requirements are a good queen and plenty of stores. A queen which might look good in an eight-frame hive can be a total failure in the big hive. These colonies in the big hive

do business on a large scale and are just as liable to run short on stores in late spring as smaller hives, and make just as great a failure in a bad year.

Contrary to many beekeepers who have used the Modified Dadant hive, I have found queen excluders necessary under certain conditions in chunk honey production, and found that they will also swarm considerably if not properly handled. In normal seasons, with a good late flow, divided colonies will make much more honey than if left in one.

No check has been kept on extracted versus chunk honey production, but it seems the bees do nearly as well with chunk supers during a good flow, and the price is higher. The competition is less in chunk production, but the market outlets are fewer. All unfinished and off-grade combs are extracted at no loss, as these make fine bait combs the next year.

My experience with section honey has convinced me that the less I have to do with it the better off I will be. It is an economically unsound proposition from start to finish, as far as I am concerned, as it involves higher labor and overhead costs, lower yield, too much of the crop off grade, and the consumer doesn't get his money's worth compared to buying extracted or chunk honey.

In closing, I want to say that anyone who tries to do without a bee paper, if he wishes to produce honey at a profit, is foolish. This also applies to those who subscribe but do not read. I would like to see more in the papers about management from a commercial business standpoint and more discussion among beekeepers themselves. Don't leave it to the editors and professors to prepare all our stuff. Let's dig it up ourselves and send it in. Let's get the good things we know before the other readers and be free to criticize each other. That's what any business needs—constructive criticism from the producers themselves.

A Beekeeping Handbook for School Use

We have just received, through the kindness of H. B. Parks, chief of the Division of Apiculture in Texas, a handbook on bees and beekeeping, put out by the Bureau of Nutrition and Health Education of the University of Texas, at Austin, with the title "Activities of the Honeybee." It is a manual for grade school work, giving questions and experiments with blank report spaces for the study of bees in an observation hive, with the plans for making and using the hive.

It proposes such problems as how bees aid flowers and how flowers aid the bees, with actual field and classroom observations; how the bees are constructed to perform their duty, a study of structural adaptations; why bees live in a colony, a study of colony life and its activity, ending with suggestions for manuscript reports to be compiled from the facts gained.

This six weeks' course of instruction was designed for the sixth and seventh grades in public schools and was first tried out in September, 1931. It is the work of Jeanie M. Pinckney and Alice H. Miller. Miss Miller, who was the originator of the idea, taught the first set of classes. She is enthusiastic, and Miss Pinckney, head of the division, thinks that the course will be very profitable.

Mr. Parks furnished the design for the observation hive to be built by the children. He also compiled the technical part of the book. Wherever this is used in the schools, it is reported that the demand for honey is immediately active. Altogether it is one of the most unique items of beekeeping publicity that has yet appeared.

The Honeybee and the Maple

Our old friend Vaillancourt, of the Province of Quebec, published for a few years a magazine entitled "L'Abeille" (the Honeybee), which he was compelled to suspend for want of funds. He afterwards published "L'Abeille et L'Erable" (The Honeybee and the Hard Maple) as a section of the "Bulletin de la Ferme" of Quebec. He now begins again an independent monthly, "L'Abeille et L'Erable," composed of two parts, one part devoted to the production of sugar and syrup from the maple tree, the other devoted to bees. The magazine is small, only twelve pages, but it is well edited, and we wish our new contemporary good success. Mr. Vaillancourt is a capable editor and his magazine should thrive.



The "Malolo," one of a fleet of fast passenger ships which connect the Hawaiian Islands with the American continent.

What Buyers Do With Hawaiian Honey

By Natt N. Dodge
Washington

This is the second article by Dodge about Hawaiian honey. Our islands of flowers send over a million pounds of honey to the States yearly. What about it?



MUCH of the floral honey produced in the Hawaiian Islands is dark in color and strong in flavor. One nectar source, the lehua flower, growing on the Island of Hawaii, produces a white honey, while that from algaroba ranges from water-white to white, shading, of course, to amber and brown, depending upon the presence of honeydew and honey from other sources. Algaroba honey granulates rapidly, but in its liquid condition it is white, clear, and of not unpleasant flavor. It is considered by some mainland bottlers as being very desirable for use in glass packages because of its clearness and luster. It is especially adapted to blending with such honeys as alfalfa, sweet clover and fireweed, for packing in glass, and where dark mainland honeys are abundant the use of algaroba honey serves to lighten the color of the blended product.

Although politically the Hawaiian Islands are as much a part of the United States as Alaska, or, in fact, any of the states themselves, geographically, and therefore from the viewpoint of agricultural economics, they assume the position of a foreign nation. Since about 1925, commercial honey producers in the United States have been feeling with ever increasing force the pressure of an unfavorable balance of supply and demand. Honey production in this country has given us from twelve to fifteen million pounds annually more honey than may readily be consumed at home. Efforts have been made in the last few years to increase materially the use of honey by the people of the United States, and to reduce the surplus by developing demand for American honey in foreign markets. With beekeepers throughout the United States awake to the importance of exporting as much honey as possible, and realizing that upon a program of exportation and home consumption depends

their future chance of obtaining satisfactory prices for their product, the importation of nearly two million pounds of honey each year from the Hawaiian Islands does not meet with much approval.

During the last five years, largely because of marketing difficulties, a certain amount of intersectional hard feeling has arisen among beekeepers of the United States. Beekeepers in the heavy producing areas in the intermountain districts, with very few large consuming centers, have been searching desperately for a market for their large crops. Before the increased German tariff became effective, foreign markets were absorbing gratifyingly large quantities of honey, but even at that time carloads of intermountain honey were rolled into Pacific Coast cities and the teeming population centers of the East, with the result that local beekeepers found these markets, which they considered as belonging to them, overflowing with intermountain honey. When, in addition, ships from

the Hawaiian Islands disgorge thousands of cases of tropical honey on the docks of Seattle, Portland, San Francisco and New York, it is not to be wondered that American beekeepers near these seaports do not feel friendly toward the unknown producers across the water, who, because they live under the same flag, are able to send in their honey, duty free. This incoming honey is particularly unwelcome because mainland beekeepers are doing their utmost to find markets for their own deadly surplus.

Under conditions of overproduction, it is natural that competition to control the existing honey markets should be very keen. Commercial honey packers, beekeepers' marketing organizations and individual beekeepers are vying for these outlets. Buyers of honey, realizing the situation, take advantage of these conditions to play one competitor against another in an effort to beat down the price. Commercial bottlers, who are not at all interested in the welfare



A typical Hawaiian apiary. (Photo by courtesy Office of Bee Culture, U. S. D. A.)

of honey producers, are driven by the pressure of lower prices to purchase honey as cheaply as possible. The temptation to purchase Hawaiian honeydew at a low figure and to blend this with the home-grown honey, thereby reducing the cost of the pack to a point where competitors may be undersold, is great. This practice, which in the past has been carried on regardless of the national food law, drags down the price, encourages the importation of Hawaiian honeydew, and aggregates the condition created by the surplus of honey in this country. It has an effect which tends to decrease honey consumption because, where sufficient quantities of honeydew are used in a blend, the flavor of the pack is impaired and people who might be steady honey users turn to more palatable sweets, all unconscious of the cause of their dislike of honey.

In 1928, 1,680,151 pounds of Hawaiian honey entered the United States mainland. Approximately half of this was honeydew. After the freight of approximately 30 cents per hundred pounds was paid, this Hawaiian honey was sold at from one-half cent to two cents per pound below the market price on mainland honey.

Although quantities of Hawaiian honey are felt most acutely by beekeepers in regions adjacent to the seaport markets where Island honey is obtained readily by honey packers, the effect of 1,680,000 pounds of additional surplus does its part toward deflating the honey market the country over. A solution to the problem is of importance to the entire beekeeping industry. Even for the producers of Hawaiian honey, the fact that their product is helping to hold prices at a low level works a hardship. In 1926 the Washington State Beekeepers' Association attempted to secure legislation which would require that all honey packers should state on their labels the source of the honey within the containers. This effort was designed to discourage the use of Hawaiian honey in blending. It is questionable if this legislation would have served this purpose had the bill become a law.

The logical solution to the problem seems apparent. White and water-white floral honeys from the Islands command a fair price in mainland markets and do not offer serious competition to the high quality honeys produced at home. The inferior grades of honey and honeydew can do little damage if diverted from the table-honey trade into baking and manufacturing channels where they belong. Strict enforcement of our established laws would discourage bottlers from using honeydew or Hawaiian honey containing honeydew (Turn to page 157)



From the Little Blue Kitchen

April

A thing of caprice
Is each sweet April day—
Skies one moment blue
And the next Quaker gray.

But each garden needs
Both sunshine and showers
To change homely seeds
Into beautiful flowers.
Lida Keck-Wiggins.

A Bride Made Happy

HONEY LADY had the great happiness one day recently of bringing new courage to a discouraged bride. The little lady had been taking great joy in preparing tempting dishes for her hubby, when suddenly—as a lot of things do come in this world—she found that her man had something “wrong” with his inner workings. His doctor issued an order that he should, under no circumstances, eat cane sugar for many months to come. The little bride was in despair. Not knowing Honey Lady to BE honey lady, but thinking of her as “just another woman,” the girl-bride poured out her little tale of woe. But Honey Lady was smiling radiantly, for here was a chance to do some real good. So, very gently she told her new friend all about honey, and how in many, many delectable ways she could use it instead of the cane sugar and get results which would come entirely within the diet restrictions of the good doctor. The bride went home happy and smiling and Honey Lady did the same, going out at once into the Blue Kitchen and sending a grateful little look up to the shelf where the honey pot always stands.

Honey Content

While our scientific American bee writers are constantly reminding us of the reasons why honey is a perfect health food, it isn't a bad idea to mention it as we are doing up the breakfast dishes in the Blue Kitchen. It is nice to remember that whenever we put honey into a concoction we also put into the blood of the prospective eater essential mineral elements, a good antiseptic, to absorb unwelcome germs and many, many energizing vitamins. We also pep up tired hearts and give them a

diet element which, like milk, is a natural food and, unlike it, is not a carrier of disease.

Honey-spread!

Now that last summer's jelly supply is running low in many households, it is a comfort to take down a jar of honey, more or less granulated, turn it into the jelly dish, and put it on the breakfast table. Nothing could be more delicious on delicately browned toast. Try it and see!

Baked Beans, Honey Sweetened

Baked beans always need some sweetening to give them that delicious flavor we all love so much. Honey Lady must confess that she had been a slave to an old-time recipe calling for brown sugar sweetening in beans, but not so long ago the bottom of the sugar bucket was entirely visible at the very time she wanted to add the sweetening to a pot of beans ready for the oven. A moment of aggravation and then Honey Lady, looking up at the shelf over her kitchen table, saw the familiar honey pot. “Why not?” she soliloquized. “If not, why not?” her sub-conscious answered, and she acted on the thought. The consequence was that she added a cupful of honey to one half cup of butter, seasoning with the usual amount of salt and pepper. This mixture she poured over the two pints of beans, which had been cooked till tender, and slipped the baking dish into the oven. Honey Lady got all the thrills of a Columbus when this new-way-with-beans appeared on the table. The family pronounced that day's baked beans better than ever!

An April Salad

Now, just before the fresh fruits are available, it is rather difficult to provide new salads for jaded palates. But there are dozens of combinations of dried and citrus fruits possible, and in each case the sweetening element can be honey. This will give a “different” flavor and provide (Turn to page 158)



By N. N. Dodge

Spotted Weather in Northwest

Weather conditions throughout the Northwest have been spotted. Along the coast the winter has been abnormally cold and the spring late. Because of these conditions bees have wintered well, not having broken cluster and gone afield nor started brood rearing in January, as is frequently the case. In central Washington, I. L. Swain, of Prosser, states: "Things began to warm up in the Yakima Valley late in February, and if the weather continues this way we will be at it full swing next week, hunting out dead colonies and those light in stores. The winter loss will be heavy, as they carried in some poisoned stores and it was a long time between flights. I find lots of dysentary and heaps of dead bees on the bottom boards." Warm weather late in February throughout Washington caused disastrous floods. Beekeepers in Colorado east of the Rockies report very little snow in the hills, and dry, windy weather, with prospects for another hot, dry summer, with a shortage of water for irrigation. In Oregon there has been an abundance of snowfall, with indications of normal honeyflows both east and west of the mountains, according to Professor H. A. Scullen, of Oregon State College. In the Rocky Mountain region the winter has been cold, but it is still too early to predict future possibilities or determine how the bees have wintered.

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Inspector Faulconer Says Snohomish "Great"

Bert Faulconer, bee inspector of Snohomish County, Washington, indicates that his county is rapidly becoming a "land flowing with milk and honey." Not only is the dairy industry of notable importance in the county, but a census of bee colonies indicates five hundred more than one year ago. The county now has 3500 colonies of bees, ranking third in the state of Washington, with Yakima County first and Grays Harbor second.

— o —

Sipple and Kjosness Visit

Professor Sipple and Mr. A. W. B. Kjosness, president and manager respectively of the Mountain States Honey Producers' Association, visited the honey packing plant of the Pacific Slope Honey Company in Seattle early in February.

Cold Weather Encourages Fruit Men

Cold weather in the Yakima Valley of Washington during the past winter has encouraged fruit men. Such weather usually kills many of the over-wintering insects which would otherwise work injury to the fruit crops. A lighter spray program, permitted by fewer codlin moth larvae, will greatly lessen the danger to bees of spray poisoning.

— o —

Seattle Star Has Its Own Honey Week

The four days, February 1 to 4, were featured by the Seattle Star, evening newspaper, as a sort of Honey Week. Miss Polly Brown, home service editor, featured honey recipes, writeups and demonstrations during these days.

— o —

Idaho Beekeepers Fight Spray Injury

Members of the Idaho Honey Producers' Association have issued an ultimatum to fruit growers of the Boise Valley. Unless orchardists are more careful in applying poison sprays, beekeepers will seek new locations. A shortage of bees in the valley would result in lack of proper pollination, which would seriously curtail the fruit crop, is the warning issued by beekeepers. The annual meeting of the Idaho Honey Producers' Association was held in Boise on February 15.

— o —

Two-Legged Bears

Martin Pykonen, beekeeper of Kelso, Washington, reports that his apiaries were visited during the winter by "two-legged bears" that tipped over hives and carried off honey. Says Mr. Pykonen: "I built a fence and posted fifty notices, 'Danger—Beware of Bear Traps and Explosives,' and haven't had any trouble since." Mr. Pykonen attended the honey grading school conducted in Portland, Oregon, late in January by Mr. Sechrist, of the Pacific Coast Bee Culture Field Station. He states that the school was very well attended by Oregon beekeepers and that the instruction afforded was very practicable.

— o —

Honey and Apple Sales

Mr. Farmer, manager of the Congdon Orchards of Yakima, Washington, who also has charge of the

apiaries operated by the orchards, indicated late in February that one-half of the 1931 apple crop had not been sold. Honey was selling in the valley, according to Mr. Farmer, at \$4.50 per case of twelve five-pound pails.

— o —

Washington Appoints American Honey Institute Committee

Appointment of more than twenty-five leading Washington beekeepers located in as many sections of the state has been made by President C. W. Higgins of the Washington State Beekeepers' Association. These beekeepers are to make up a group to be known as the American Honey Institute Committee of the Washington State Beekeepers' Association, the purpose of which will be to increase the consumption of Washington honey, to cooperate with the American Honey Institute, and to lay the ground for an effective publicity program of state-wide proportions during National Honey Week of 1932. Each member of the committee will be in charge of the work within his own territory and will solicit the assistance of local newspaper editors, commercial clubs, service clubs and other organizations interested in the boosting of home products. The campaign will be carried on along the lines of instructing Washington citizens in the food and health values and in urging them to support local agriculture by using more Washington honey.

— o —

Mandery Predicts Normal Nectar

Fred Mandery, of Tenino, Washington, who some months ago pointed out, from data which he has accumulated over a period of fifteen years, a close relationship between winter temperatures and the flow of fireweed, predicts normal and above normal nectar secretion from this Northwest honey plant next summer.

— o —

Todd Announces Two-Year Survey

Mr. Frank E. Todd, of the Pacific Coast Bee Culture Field Station, has announced that the station, cooperating with the Department of Farm Management of the Oregon State College, will conduct a two-year survey to determine the cost of honey production in the state of Oregon. Records will be made in the majority of commercial apiaries throughout the state.

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William Mosteller to Represent Wyoming on Mountain States Board

Through an error we omitted the name of William Mosteller, of Casper, Wyoming, as director of the Mountain States Honey Producers' Association for Wyoming. Mr. Mosteller was in attendance at the last

Board meeting. We are sorry that his name was omitted in the original list.

New Publication on Honey Plants

We have recently received a copy of an extended review of the "History of Cultivation of Melliferous Plants in Russia," by L. E. Ahrens. It comes from the Institute of Plant Industry of the Lenin Academy of Agricultural Sciences, at Leningrad.

The subject is one that is of great interest to us, but unfortunately there is no one connected with our staff who is sufficiently acquainted with the Russian language to translate it properly. It is unfortunate that so much of the good work done by European workers is unavailable to most American beekeepers because of inability to understand the language in which it is published.

My Experience With the Modified Dadant Hive and Italian Bees

For the present season I had a fair chance to test the Modified Dadant hive side by side with the eight-frame Langstroth. Most of the colonies in the large hive produced one hundred pounds of extracted honey, while those in eight-frame hives produced scarcely half that amount. One of my Italians in the large hive produced 160 pounds of extracted honey and completed eleven extracting combs with frames $6\frac{1}{4}$ inches deep. Since this locality is not the best for honey production, it shows what a good Italian stock can do in a large hive. I prefer the large hive to the smaller hives, and I like a good Italian strain of bees. I know the same Italian strain of bees under my care were of little value, but this does not prove that all are inferior to other races of bees. A queenbee bred under unfavorable conditions will always be a poor one, no matter of what race she may be.

Bro. Alphonse Veith,
St. Meinrad's Abbey,
Indiana.

What Buyers Do With Hawaiian Honey

(Continued from page 155)

in their table-honey blends. It is up to the beekeepers of the country to impress upon the man in charge of the State Pure Food and Drugs Department of each state, especially those states having seaport cities, the importance of the strict enforcement of the food laws regarding honeydew. By this means no injustice would be done the producers of Hawaiian honey and a certain amount of relief and security would be afforded mainland beekeepers.

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

SUGAR CANE JUICE FOR SPRING FEEDING

1. Please tell me something of sugar cane juice (uncooked) as building up food for bees.
2. Have bees been known to build up on artificial pollen with no real pollen? (By artificial pollen I mean cotton seed meal or wheat flour or any powdered grain.)
3. What is the best artificial pollen?

ILLINOIS.

Answer—1. Sugar cane juice, raw, contains but a small proportion of sugar. It may do to feed bees in spring, when they can fly every day. But it would be deadly for them in winter or fall. Better use sugar syrup.

2. We have often supplied bees with wheat flour, in open boxes, in the spring, when there was no pollen, and they appeared to breed well on it. But the scientists tell us that it is not a substitute for the pollen of flowers. Perhaps some real pollen is necessary as part of the diet. But we would not hesitate to use it again, when pollen is not to be had.

3. We always used wheat flour, packed down in boxes by hand pressure. The bees are first attracted to it by putting some old combs in the boxes. We have fed hundreds of pounds in this way.

WEIGHT OF BEES IN SPRING

1. What, or how much, in your estimation, should the bees of a fair, medium and strong, cellar-wintered colony weigh at the time of removal from the cellar? I mean the bees only, not with hives, etc.
2. What, in your estimation, should the bees in a fair, medium and strong colony weigh at the time of (say clover) harvest?

IOWA.

Answer—1. The bees of a good colony, at this time of the year, in our northern states, should weigh from three to five pounds.

2. The bees of a strong colony, at the time of white clover or when they are likely to make preparations for swarming, should weigh between ten and twenty pounds.

However, I must say that we rarely weigh the bees of a colony at any time. It is not necessary. We judge the strength of a colony by the number of combs that they cover and fill with brood.

WHEN TO TRANSFER BEES

I have a hive of bees which are in a "home-made" hive (not standard). It has frames in it, but not foundation. The combs are all crosswise of the frames. I am going to transfer this colony to a standard hive with foundation. About what time in spring should I do this?

Your Bee Journal is sure a good bee magazine.

INDIANA.

Answer—The proper time to transfer bees is during fruit bloom, because at that time there is less honey in the hive than at any other time and yet they are making enough of it to keep them from trying to rob.

TAKING BEES FROM A TREE

I have a swarm of bees which are living in a part of a hollow tree that has been cut down. Could you please give me some advice on how to get these bees in a beehive, and when it is the best time?

NORTH DAKOTA.

Answer—Fruit blooming time is the proper time to transfer bees. If you have

a movable frame hive, you may drive the bees out of the "gum" and transfer the brood combs into the movable frames.

If you don't like to transfer in this way, just fill your movable frames with comb foundation, then put the movable frame hive over the top of the "gum," without any bottom board between them, making the openings fit under each other. Drive the bees so that the queen may go into the movable frame hive. Enough bees will remain in the "gum" to take care of the brood until it is hatched. At the end of twenty-one days you may remove the gum, as there will be no more brood in it, except perhaps some drone brood.

STARVATION AND FEEDING

1. I bought three swarms of bees in January, when weather was very cold. I put them in a piano box, put straw on sides and top and kept lid down. They were used to being without any protection. They were in eight-frame size hives. They weighed 53 to 55 pounds each. In March I took them out and moved them about 100 feet. Some go back and fly around piano box on warm days. One hive was very light; in several days there were no bees in it, or honey. The floor was covered with dead bees. Do you think bees died for lack of honey?

2. One hive is light now. Do you think I had better feed them? How should I prepare sugar and water? How much? What should I put it in? Put it outside of hive?

3. Will the empty hive do to use with comb that is in it?

4. Would it be better to put extracting super on top of each hive so bees will have more room and more place to make honey for themselves?

5. Are ten-frame size hives best? Which are best, beehive sections or plain sections? I haven't supers or sections. I am a beginner.

6. How can I tell if moths or foulbrood is the trouble?

7. How can I disinfect that empty hive and comb?

8. Is there anything that can be put on bee sting so it will not swell up?

9. In getting honey out of a bluff, a hole in rocks, will smoking bees answer the purpose? Is there anything that can be sprayed in to kill bees and not hurt honey?

IOWA.

Answer—It is probable that that colony starved to death. The best way to find out is to examine the hive. I believe you will find no honey in it.

2. If the hives are light, you had better feed the bees with sugar syrup, if you have no honey. About half and half in weight, or about seven pounds of sugar for a gallon of water will do. We use what we call a can feeder, which may be made out of any tin can. Fill it with syrup and invert it over the combs right above the brood, after having tied a cloth over the mouth of it. We generally invert the feeder on a pan, so as to let a little of the feed flow, before putting it over the combs. After that the air pressure prevents it from running out any faster than the bees will use it. Feed them in the evening, when they are not flying. Don't feed out of doors, as it attracts robber bees.

3. Of course the hives that have combs in will do to use for increase, if you don't let the moths take possession of them before using them.

4. The extracting supers have to be put

on to use the feeders on top of the brood chamber. Keep the frames out of them until you are through feeding.

5. Ten-frame hives are better than eight-frame, and the Dadant Modified hives still better. I like beeway sections best. But we do not all agree on this.

6. You can find out about moths or foulbrood by examining the combs. There is no danger of moths in early spring. Foulbrood is in the cells and has a smell of joiner's glue.

7. If you have any hive infected with disease, the best way is to burn up the combs and singe the hive with a blow torch.

8. If you can put ammonia on a bee sting at once, it will not swell much, but most of the time the poison is already in the blood when you put on your remedy and it does not do any good.

9. If you cannot drive the bees out of a hole in the rocks, and wish to kill them, burn some brimstone in the hole, closing up all issues until it is burnt. It will not hurt the honey, for it soon evaporates.

BEEES WITH A "STOMACH ACHE"

Can you furnish me with any information for a cure for bees? I am not sure of the name of the sickness, but the bees seem to fly out in the cold, from some sort of a stomach ache. MICHIGAN.

Answer—I am not sure of what is the matter, by your description. But it is probably constipation, caused by the holding in the bowels of too much residue.

I would recommend that you feed those bees with sugar syrup mixed with a very slight amount of ginger, or peppermint. This usually acts as a tonic. The disease will not disappear right away, but it will get better.

PUTTING FOUNDATION IN FRAMES

I am going to transfer some bees from box-hives to modern hives. I want to use the straight pieces of comb. How can I fasten these in well-wired frames and imbed the wires? NORTH CAROLINA.

Answer—We do not imbed the wires in the combs that we transfer. We use heavier wire than the common wire used in foundation and we either bend it so as to drive the edge of it in the wood of the frame or bend it around the edge of the frame, as you will see in the cuts of our pamphlet on transferring bees. We sell that pamphlet for 10 cents.

After the combs have been fastened in by the bees, the wires are removed and are kept for another transfer.

LAYING WORKERS

1. I have one colony that is queenless and has not very many bees, and the workers are laying. Please advise what to do.

2. Do you think that at this time of the season it is all right to put the queen excluder and extracting supers on?

3. At the beginning of the honeyflow, would it be advisable to remove what honey is left over that is yet in the supers from last winter? Please advise.

4. How soon does the moth start to work? KANSAS.

Answer—1. A queenless colony, with drone-laying workers, at this time is not of any value except for the combs. I would advise uniting it with another colony or putting a good-sized division into it, with a laying queen. Unless the division you put in is very strong, there might be danger of the laying workers killing the new queen, so perhaps it is best to unite those bees first with another colony.

2. It is too early, at least in this latitude, to put on the supers. Better wait till the white clover is in full bloom, or at least till the bees begin to bring in a little honey.

3. Yes, if there is a large quantity of honey from last season in the supers, it is best to remove it. Usually the honey from the fall harvest is much darker than that of the spring crop, so it would be best to remove it if only for that reason. However, if there is very little of it, it may not be worth while to remove it.

4. The moths start laying eggs in April or May, but at that time they are not numerous.

SEVERAL QUESTIONS ABOUT FEEDING

1. Can the sap be taken from the soft maple trees and made into candy for the bees in early spring? If so, how? Does it have to be boiled down?

2. Could the bees be fed honey and water in spring to start brood rearing? Would fifteen gallons of water to five gallons of honey be too thin for the bees if fed out of doors?

3. As my bees have about thirty pounds of honey left in each colony and yet try to rob each other, I thought that the robbers were stray bees at first, but I sprinkled flour on them and they went into my own hives. They are the little, black, timber bees. Do you think feeding a little would stop them? My golden Italians do not seem to rob at all, and they haven't got as much honey as the others. There are no other bees within five miles of me.

4. As I have some bees that are in two-story, ten-frame hives that were hived last year when I was hurt and was not here, they did not put any foundation in them and the combs are built every way that you could think of. What would be the best time to put them on Dadant wired foundation, and how to keep them from destroying it? IOWA.

Answer—1. We have never known of soft maple trees furnishing sweet sap. The hard maple trees have sweet sap, and I suppose that this could be made into syrup for the bees in the usual way. But I would prefer to feed the bees ordinary sugar syrup, about five pounds of sugar per gallon of water.

2. Better use sugar than honey. But if you prefer to use honey, put about a gallon of water to a gallon of honey. The reason we prefer sugar syrup is that it does not attract the robbers as honey does.

3. Feeding will not stop robbing; it will rather increase it. If your hives have thirty pounds of honey, they do not need feeding. If you want to hasten them in brood rearing, you may uncap a little of that honey each week. It will induce them to breed faster. Pure Italian bees are not as bad robbers as the little black bees.

4. During fruit bloom is the best time to insert frames of foundation in the hives that have crooked combs, and removing the crooked combs to straighten them out. The bees will not destroy comb foundation when it is given to them in the brood chamber, but will build it out.

MAY DISEASE

I have a colony of bees that have been dying since the last of March. They seem to come in loaded and in a short time you see the well ones dragging the sick ones out to die. They will crawl around a while and die. I have opened several and they seem to be filled with a watery substance. I am losing a large handful every day. I have an exceedingly prolific queen which has plenty of brood and eggs. OKLAHOMA.

Answer—We are well acquainted with this trouble, which we call "paralysis, constipation, vertigo, May disease." It is caused by the bees being unable to discharge the fetid matter in their abdomens. Some scientists have discovered bacilli which they consider the cause of the trouble. But it is originally caused by bad food at the time the bees are confined to the hive and appears to become epidemic. But it does not usually invade more than one colony. We

find a mixture of sugar syrup with some peppery substance, such as lavender, ginger, etc., quite beneficial. The disease usually disappears during the latter part of May, unless the colony is very much weakened, when it may die.

You will find this trouble mentioned at paragraph 785 of our Langstroth-Dadant book, "The Honeybee."

DRONES FOR EARLY MATING

I have a hive of bees that lost their queen. I gave them fresh brood from another hive and they are building several queen-cells. I want to requeen some of my other hives with them. What I want your opinion on is: Do you think there will be drones enough for them to mate with, this early? There were several drones in my hives last fall, but I can't find any among them this spring. WEST VIRGINIA.

Answer—It is not likely that your bees have any drones yet. They usually kill their drones at the end of the year, sometimes as early as August and September, depending upon the wealth of the colony. They rarely keep any as late as November unless they are queenless.

It is quite probable that your young queens will get lost in trying to mate. If not, they may pass the mating period and become drone-layers. At any rate, I believe that you will have to watch those colonies that are trying to rear queens. It might pay you to order queens from the South for early introduction.

From the Little Blue Kitchen

(Continued from page 155)

one of the elements of change so grateful in spring.

For instance, Honey Lady concocted this from the Blue Kitchen larder and passes it on:

April Salad

Take two oranges and cut into cubes; a scant handful of seedless raisins, cut small; chop six stalks of celery rather fine. Mix all these together. Arrange a generous helping in a salad dish on a lettuce leaf and pour slowly over each a spoonful of extracted honey.

To make it look prettier and give also a bit of piquancy, one may add a Marischino cherry. (Some of these are green and some red.) Or, if desirable, one may add a few home-canned "every-day" cherries.

Cherry, Orange, Banana and Honey Dessert

Honey Lady also offers the following as a "different" dessert which was greatly liked by her own family:

Contents—One pint jar of ordinary canned cherries, two small oranges, one banana. Dice the orange and banana pulp and thoroughly mix with the cherries.

Directions—First drain off the liquor from the cherries. Add to this one-fourth cup of extracted honey. Then add the banana and orange cubes to the cherry pulp, and over all pour the blended honey and cherry juice.

With this fruit dessert, gingerbread is a nice cake to serve. And,

if milady the cook is one who is eschewing cane sugar and is her own baker, she can make a delicious ginger cake with honey by using this recipe, which is a favorite in the Blue Kitchen and which Honey Lady obtained from a friend:

Ginger Cake

Ingredients—1 cup honey, $\frac{1}{2}$ cup brown sugar, 1 teaspoonful salt, $\frac{1}{2}$ teaspoonful almond or lemon extract; $\frac{1}{2}$ teaspoonful each of cloves, cinnamon and ginger; 2 tablespoonfuls soda dissolved in 1 cup boiling water, $\frac{1}{2}$ cup cold water (iced if possible), scant cup lard or vegetable shortening, enough flour to make consistency of molasses, 1 egg.

Directions—Mix honey with the brown sugar; add the salt, then the spices nicely blent, then the flavoring. Mix well and then add the dissolved soda, stirring well. Add the shortening, using silver knife or fork, then stir in the flour and later the egg, well beaten with wire egg beater. Bake in an even, hot oven.

Just for a Change

Honey Lady has been sweetening rhubarb sauce and pies with honey this spring. Try it. It's great!

The Bees Pay Best

(Continued from page 143)

nucleus he gives a young queen and places the hives in the locations where they are expected to gather the sweet clover crop. These little colonies build up slowly, but have quite a cluster of bees by the time the sweet clover begins to bloom. When the alsike bloom is over at the home location, he shakes all the field bees from the hives into screened cages, first taking care to make sure that the queen is not disturbed. These field bees are carried to the sweet clover district and given to the nuclei which have been building up there. The addition of the working force of the home colonies provides a large number of worker bees for each hive to gather the sweet clover crop. The queens and emerging brood left behind at home will have time to grow into strong colonies again before winter, and he is able to get two crops of honey instead of one as before. He also avoids moving the heavy hives at the height of summer.

When the harvest is all gathered in the fall, he brings all the bees from the sweet clover fields home to winter in the big cellars which he has prepared. With a thousand hives of bees in addition to the dairy and farm crops, Hofmann is a busy man. With bees, pigs, cows and poultry, he finds the bees pay best and he enjoys them most.



Calamity in New Jersey

In "New Jersey Bee Culture" the president's address indicates that the Governor has eliminated bees from the budget for the coming year. No money for inspection, for research, or for pollination work with bees. With one stroke of the pen the Governor has removed all the careful work of the past years.

It proves how little known are the vital benefits the bees bring in New Jersey. For instance, the increase in the number of colonies since foul-brood has been checked in the state has brought a total of over half a million dollars extra cash annually to New Jersey, for its farming communities—money otherwise sent to other states for honey consumed in New Jersey.

Action is needed right now. See your assemblyman and state senator and impress upon them the need for restoring the two appropriations for research work and for disease control.

Kansas Beekeepers Don't Care to Pay the Piper

One year ago we passed a new law. Not much was done with it last summer because all the money was spent the year before. This year the Entomological Commission were going

to attempt to put it into effect, and one of the rulings was that all bees and honey sold or transported in Kansas must have a certificate of inspection.

Since there was not enough money appropriated to do all the work, the cost of inspection was to fall on the beekeepers. The organized beekeepers were not in favor of this ruling and an opinion was also obtained from the attorney general that the ruling was invalid.

George Pratt, Secretary,
Kansas State Beekeepers' Ass'n.

Idaho Association Plans July Picnic

A picnic of the Idaho State Honey Producers' Association will be held at Filer in July, according to plans made at Twin Falls.

Glen Perrins.

Idaho Plans Test Case

The Idaho State Honey Producers' Association has requested the state commissioner of agriculture to interview the attorney general with a view to making a test case of the Idaho bee law. The purpose is to bring to light any defects in the law and to make sure of position in enforcement of the payment of license

(Continued on page 160)



That.. Chewy Center

Calls the Customer
Back

Dadant's
Surplus Foundation
Is Good

HILBERT METHOD CUT COMB HONEY

We did not realize the large amount of interest in cut comb honey that would be created by our article in American Bee Journal. It being impossible to fully describe our method by letter, we are preparing an illustrated book telling our secrets in detail of more than twelve continuous years of producing cut comb honey, which with us has been a real success. If you have tried cut comb and failed, don't be discouraged. Why spend hundreds of dollars experimenting when you can get our many years of experience as originators of cut comb for \$5.00. Anyone ordering this book will receive our support, which will assure you success in producing, packing and marketing. Place order now for delivery, C. O. D.

We will also furnish all supplies and modern equipment for cut comb.
Get our prices Keep your bees for profit in 1932

JAMES E. HILBERT, R. F. D. No. 5, TRAVERSE CITY, MICHIGAN



Time
Tested

WOODMAN BEEKEEPING SPECIALTIES

Bee Smokers

WOODMAN'S
NEW BINGHAM
BEE SMOKER

BIG SMOKE
WITH SHIELDS
PAT.



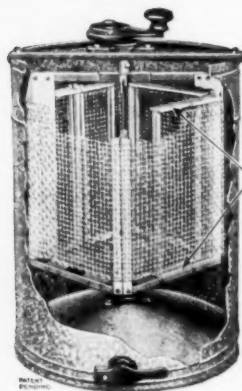
Cool Smoke—
In Quality

BINGHAM SMOKERS have been on the market over 50 years. Guaranteed to please in performance, materials, and workmanship. A new type valve in the 4-inch sizes gives special satisfaction. Plenty of draft, won't go out; always ready with cool smoke. Ask your dealer. If he can't supply you, write to us.

Big Smoke, with shield—4x10	\$1.50
Smoke Engine—4x7	1.00
Doctor—3 1/2 x 7	.85
Little Wonder—3x5 1/2	.50
Shield for Smoke Engine, extra	.25

Honey Extractors

UNIVERSAL
Quality — Capacity — Price



Medium Four

The 4-8 UNIVERSAL HONEY EXTRACTOR is the most substantial extractor on the market, except large power radials. Takes four frames any size up to 11 1/4 inches; or eight, any size up to 6 1/4 inches deep, at a loading—twice the capacity or half the cranking for same amount of honey.

W. E. Tuttle, King City, Calif., ordered two. He says: "The Universal is a sturdy little brute and will extract anything in the hand power line."

Price, hand power—\$29.50. With friction clutch pulley for power, \$40.00. Shipping weight, 130-140 pounds.

MEDIUM FOUR EXTRACTOR—takes four frames 9 1/4" deep, eight frames 5 1/2" deep. Most for the money in small extractors. Price \$15.00. Shipping weight, 50 lbs.

We make eight different styles and sizes of extractors, from \$7.50 to \$40.00. We have a new CAPPING BASKET and tank, for best way of handling cappings. Address Dept. A, for circular on Extracting Equipment.

Bee Veils

Woodman's Folding Wire Veil
Gives Clear Vision



A 100% veil. In a meeting of thirty-six state inspectors, all of them, when given a choice of veils, took Woodman's Folding Wire, Clear Vision Bee Veil. It is cool and ventilated; exceptionally well made; folds flat when not in use.

Price, 75c each. Postage extra.

Send for complete new catalogue of WOODMAN'S SPECIALTIES for 1932.

A. G. WOODMAN CO. GRAND RAPIDS, MICHIGAN

fees and the conviction of the violator.

The Association voted to hold its next meeting in Boise, during the sessions of the State Horticultural Association, in January.

Glen Perrins.

Annual Report of League

Complete report of the 1932 convention of the American Honey Producers' League is now available to members, including all the addresses and discussions, on payment of the annual membership dues of \$1.00. Memberships include the right to use the \$100.00 reward warning poster. Individual posters are \$1.00 each.

All income above the minimum expenses of the League this year will be turned to the support of American Honey Institute.

Send your dues or requests for further inquiry to V. G. Milum, secretary-treasurer, American Honey Producers' League, Vivarium Building, Champaign, Illinois.

Eastern Massachusetts Society Officers

The officers elected at the annual meeting of the Eastern Massachusetts Society of Beekeepers on March 5 are as follows: President, George A. Meigs, Essex County Agricultural School, Hathorne, Mass; secretary-treasurer, Earl B. Pride, 33 Coburn Street, Lynn, Mass.; member of Board of Directors for three years, M. W. Barrett, 24 Emmet Street, Hyde Park, Mass.

At the meeting Frank E. Miller, of the Massachusetts State College, Amherst, was the speaker, on "Evolution of the Bee." This was a most interesting topic and well handled by the speaker.

E. B. Pride, Secretary.

North Dakota Meeting

The annual meeting of the North Dakota Association, held at the Agricultural College in Fargo, was one of the most successful in the history of the organization. A total of sixty-one registered for the meeting.

Charles Engle, president, urged beekeepers to consider the work of the American Honey Institute and give it their support. "Any beekeeper who is able to give support to the Institute but holds out for some reason or other is making a mistake. Members of the Association have already contributed about \$150, but we are far short of our goal."

Mrs. Winefred B. Loggans, of the Kellogg Company, discussed the use of honey and during the afternoon treated the delegates to Honey Krisp cookies.

Dr. Walster, dean of the School of Agriculture, discussed the history of sweet clover in this country, stating

that it has been known in America for two hundred years, but that it is the only important agricultural crop that has recently been captured from the weeds.

Miss Constance Leeby, of the Home Economics Division, in commenting on the use of honey in cookery, pointed out that honey lends itself beautifully in combination with many forms of cookery, salads, and desserts.

Prof. H. L. Bolley gave a splendid talk on South America at the annual banquet, and Prof. Stevens, of the Agricultural College, gave a talk on wild bees, using lantern slides showing the species in natural color.

Other speakers were Paul S. Johnson, Callaway; Bruce Morehouse, of Morris, Minnesota; Dr. Nelson, professor of bacteriology; J. W. Beatty, of Fargo, Clara A. Richards, and L. S. Thom.

Officers for 1932 include Charles S. Engle, president; J. D. Beals, vice-president; J. A. Munro, secretary-treasurer; Charles Hausmann, Paul S. Johnson and Jack King as directors.

J. A. Munro, Secretary.

St. Louis County (Missouri) Association to Hold Monthly Meetings

We hold our meetings regularly every month, on the last Saturday, at 8 p. m., in the office of the St. Louis County Farm Bureau, 7821 Forsythe Blvd., Clayton, Missouri. Beekeepers should note the time and place.

O. C. Smith,
Secretary-Treasurer.

February Meeting of Cook-DuPage (Illinois)

President, Mr. C. L. Duax; first vice-president, Mr. A. D. Boal; second vice-president, Mr. Leroy Stockdale; third vice-president, Mr. M. Guthrie; fourth vice-president, Mr. Adam Bodenschatz; fifth vice-president, Mr. William Bigel; secretary and treasurer, Mr. E. J. McCormick.

The twelfth annual business meeting was held Monday evening, Feb-


Attractive New Labels for the New Hazel-Atlas Bee Hive Jars

Ask for samples and prices. Sized to fit the three jars. See above ad for this brand new honey jar design.


You will like them, and our labels for them are just right in size and colors.

Write us for label samples. A full line of labels in our sample catalogue for all kinds of honey jars and pails.

Write
American Bee Journal
Hamilton, Illinois



NEW

BEE  HIVE

HONEY JARS

A practical design —
attractive for table service


in ½ pound, 1 pound
or 2 pound sizes complete
with either Gold
or White screw caps.

BEAUTIFUL CLEAR GLASS
WITH EASY LABEL SPACE

(Design Patent applied for)

WRITE FOR
SAMPLES AND PRICES

HAZEL ATLAS GLASS COMPANY

GLASS  WARE

WHEELING, W. VA.

Sales Offices in all Principal Cities

STOP! STOP! LOOK! LISTEN!

Send us your wax to be worked into foundation. Early orders and wax to be worked into Non-Sag Brood Foundation are coming in with a rush. Beekeepers everywhere are using Non-Sag Brood Foundation with gratifying results. Once used, always. Our thin Super Foundation is made of the purest and whitest beeswax obtainable and is giving the best of satisfaction. Try it and be convinced. Write us for samples and prices.

We carry a full line of beekeepers' supplies

GUS DITTMER CO. :: AUGUSTA, WISCONSIN

Mention the American Bee Journal When Writing Advertisers

Koehnen's Package Bees -- Queens

QUALITY -- SERVICE -- SATISFACTION

OUR 1932 PRICE:

	1	25	100
Two-pound package with queen -----	\$2.15	\$1.85	\$1.75
Three-pound package with queen -----	2.60	2.30	2.20
Queens -----	.75	.65	.50

Prompt Delivery

KOEHNEN APIARIES
GLENN, CALIFORNIA

Smith's Superior Package Bees and Queens

HIGH QUALITY, LOW PRICES, BEST OF SERVICE,
GUARANTEED SATISFACTION.

Four essentials for your SUCCESS. Write for our prices before you
buy — they will save you MONEY.

N. B. SMITH & COMPANY :: CALHOUN, ALABAMA

ROOT SERVICE CHICAGO

BEEKEEPERS — THE TIME WHEN
PREPARATION
COUNTS IS COMING SOON AGAIN

The best time to prepare is now. Will you be ready with necessary equipment
to help your bees get the crop when it comes?

Root Quality supplies are most satisfactory. Prices are much reduced.
Your orders will be filled promptly here.

Write for our new 1932 bee supply catalog

A. I. ROOT CO. OF CHICAGO
224 W. HURON ST. CHICAGO, ILL.

Package Bees & Queens

33 1/3% discount from our regular prices

Send for FREE circular and let us know what your requirements
are going to be. We furnished one honey producer 600 queens last
season, another 500, besides lots of other orders, and at a much higher
price than we are asking this year. Have shipped thousands of pounds
of bees all over the U. S. A. and Canada.

BLUE BONNET APIARIES
R. 1, Box 33, Mercedes, Texas

ruary 15, 1932, in Parlor "F" of the New Bismarck Hotel and the above officers were elected for 1932.

The speaker of the evening was Mr. Kenneth Hawkins, of Watertown, Wisconsin, whose message to us was very instructive. I believe, Mr. Hawkins, that the majority of our members agree with your idea of clipping off the head of the non-producing queen and superseding her with a young laying queen or uniting the colony.

We also enjoyed an entertainment which was furnished by our home talent. Miss Clarice Parkhurst favored us with a piano solo and as the accompanist for our other talent. Mr. C. L. Duax brought spring just a little nearer to us with his bird whistling solos. Mr. R. C. Bryant brought out the musical possibilities of a saxophone in his solos in such a way that many of us have altered our opinions about saxophone players. A short reading was given by Mrs. R. C. Bryant. The program closed with a vocal solo by Mr. E. J. McCormick.

We intend to hold our next meeting in March, at which time package bees and spring management will be fully discussed.

E. J. McCormick, Secretary.

Idaho at Boise

The Idaho State Honey Producers' Association held their annual meeting February 15 and 16 at Boise, Idaho. Mr. H. H. Keck, vice-president, presided at this meeting and the following officers were elected: Mr. H. H. Keck, of Paul, Idaho, president; Mr. G. A. Koger, Meridian, Idaho, vice-president, and K. M. Hutteball, Boise, Idaho, was re-elected secretary-treasurer.

It was decided at this meeting that it was up to the honey producers to advertise honey and thereby increase the local demand for honey.

It was also decided that members could send a sixty-pound can of honey, or the equivalent in money, to the State Association for this purpose. This year the proceeds will be used to pay for the honey display at the Idaho state capital and to send a display of Idaho honey to the fair at Chicago next year.

K. M. Hutteball, Secretary.

Partial Rate Victory for Utah

Partial victory in Utah's fight to reduce the cost of freight rates on honey to eastern markets is reported by D. H. Hillman, Utah state apiarist. Reductions have been effected on some roads, while others have permitted the partial loading of cars at various points without additional cost, he says. There are only eight cars of honey from this year's crop remaining in storage, four in Salt Lake and four at Price. This honey

is already ordered and will be moved by the middle of February.

Glen Perrins.

Illinois Local Association Meetings By V. G. Milum

The Cook-DuPage County Association held its annual business meeting and election of officers at the New Bismark Hotel, Chicago, at 7:30 p. m. February 15. Mr. Kenneth Hawkins, of Watertown, Wisconsin, addressed the beekeepers and local talent furnished special entertainment in the form of musical numbers.

A meeting of Ford County beekeepers was held at the court house at Paxton on Wednesday, January 24, starting at 10 o'clock, with V. G. Milum, of the University of Illinois, and others appearing on the program.

The Piatt County Association held its annual meeting and election of officers on Saturday, January 16. Mr. C. W. Brown, of Monticello, was chosen as president and Emory Warner reelected as secretary-treasurer. Mr. M. G. Dadant, of Hamilton, Illinois, who had assisted with the short course at the University of Illinois, appeared on the Piatt County program, as also V. G. Milum.

Peoria County beekeepers, at their annual meeting on January 4, elected the following officers: President, C. G. Streider, Brimfield; vice-president, J. Floyd Strobe, Pekin; secretary, Mary F. Johnson, Peoria; treasurer, S. B. Moon, Peoria. Another meeting was to be held during the first week of February.

The secretary of the Warren County Bee Association sends the following annual report, received too late for inclusion in the combined 1930-1931 printed report: "The honey crop was very light in Warren County this year, due to the prolonged drought. The fall rains enabled the bees to store enough dark honey to last them through the winter in most cases. Our association secured the services of Elmer Kommer to inspect several apiaries and a number of cases of American foul-brood were treated. The same officers are holding over for 1932."

Death of Old-Time Beekeeper

Seventy years ago there came from Canada a beekeeper who had chanced his lot in America and chosen Missouri for his home. This was F. G. Ashbaugh, at that time twenty-four years of age and living at Avalon, Missouri. Mr. Ashbaugh has kept bees there ever since and recently died at the age of ninety-four. A good ripe old age and a wonderfully long and happy experience with his bees. From what his daughter says, he was interested to the last and always took greatest pleasure out of handling his bees.

How many there are of the bee-



DISPLAY YOUR HONEY PERFECTLY

Dependable Service on Standard Sizes

Our fluted honey jars are made as per specifications of Standardization Committee of the American Honey Producers' League

Distributed by

DADANT & SONS, HAMILTON, ILLINOIS
and

G. B. LEWIS CO., WATERTOWN, WIS.

For Michigan

A. G. WOODMAN COMPANY, GRAND RAPIDS, MICH.

G. B. Lewis Co. 1921 E. Fourth St., Sioux City, Iowa
G. B. Lewis Co. 1304 Main St., Lynchburg, Va.
G. B. Lewis Co. Colony & Montgomery Sts., Albany, N. Y.
G. B. Lewis Co. Main, S. & 16th Sts., Wheeling, W. Va.

HART GLASS MFG. CO., DUNKIRK, IND.

HART BOTTLES & JARS

Don't Forget That We Give 25%
Overweight of
YOUNG ITALIAN BEES

Prices with young Italian or Caucasian Queens	1 to 4 packages	2 lbs. \$2.25	3 lbs. \$2.75
	5 to 24 packages	2.10	2.60
	25 or more packages	2.00	2.50
EXTRA QUEENS \$.60 EACH			

ROY S. WEAVER & BRO. :: NAVASOTA, TEXAS

Mention the American Bee Journal When Writing Advertisers

RED RIVER VALLEY APIARIES

The home of three-banded Italians. No better bees and queens produced. No better service to be had. Safe arrival and satisfaction guaranteed. Twenty-seven years among the bees. I know what I produce and how to ship. Satisfied customers from California to Maine, and every province in Canada.

No deposit required for placing your order. The most northern shipper in Dixie, guaranteeing you quicker and cheaper transportation.

2-lb. package with queen \$2.00
3-lb. package with queen 2.75

All who have my circulars, be governed by these prices
Shipping points: Arthur City and Paris, Texas

J. G. BRUNSON :: CHICOTA, TEXAS



Strawberry Plants

Strawberries are a desirable source of added income and a pleasing dish for the home table. To enable us to supply plants for our customers, we have contracted with Melvin Pellett to grow them for us at his Iowa gardens.

The Dunlap is the most popular variety grown in the Middle West. It is perfect flowering, a vigorous grower, a free plant maker, and produces an abundance of fine fruit.

We offer fresh dug, vigorous young plants, shipped direct to your address at planting time in early spring.

100 postpaid.....\$1.25
200 postpaid..... 2.00
1000 by express collect... 6.00

Address all orders to

Dadant & Sons, Hamilton, Ill.

WRITE US FOR LETTERHEAD DESIGNS

WATERLOO ENGRAVING & SERVICE CO.
WATERLOO, IOWA

CITRONELLE PACKAGE BEES GIVE

QUALITY, QUANTITY AND SERVICE

We furnish only pure Italian bees and queens, give generous weight, and make prompt shipment.

2-lb. Package with young laying queen \$2.00
3-lb. Package with young laying queen 2.50
Select young laying queens, each50

We have hundreds of young laying queens ready for immediate shipment. Every queen fully guaranteed to give satisfaction in every respect.

Substantial discount on quantity orders

CITRONELLE BEE COMPANY, Citronelle, Ala.

Mention the American Bee Journal When Writing Advertisers

keeping fraternity who also have the same outlook of life and the same love of bees which will make them beekeepers regardless of difficulties and regardless of depressed times or good ones.

Needless to say, one of the full measures of life is in enjoying one's work, and we know of no other occupation that gives the full enjoyment that beekeeping does. Mr. Ashbaugh was a wonderfully fine man, whom we were acquainted with over all of his American beekeeping experience.

Our sympathy goes to his daughter, who has had, more than we, firsthand information as to what it means to be a life-long beekeeper.

New San Bernardino County Association

The San Bernardino County Honey Producers' Association was organized at San Bernardino, California, January 30. Membership, one dollar a year, payable in January. Every new association helps. Get busy, San Bernardino beekeepers, and "jine up."

David G. Sanborn.

One Hundred Thirty-six Entries in Harrisburg Farm Show

Featured by three county exhibits of honey and other bee products, there were 136 individual entries in the sixteenth annual farm show held at Harrisburg, Pennsylvania, January 18-22. The annual meeting of the state association was held in connection with the show. Officers for the year for the Pennsylvania State Association are: Harry B. Kirk, Harrisburg, president; Harry W. Beaver, vice-president; Charles N. Greene, Troy, secretary.

Clarence A. May.

Stinson, of Twin Falls, Passes On

C. H. Stinson died at his home in Twin Falls, Idaho, at the age of 63. Mr. Stinson leaves a wife and a son just come of age.

He was for years one of the larger honey producers of the West, running from 1000 to 1200 colonies.

He organized, a few years ago, the Twin Falls Bee and Honey Company, in which he owned nearly all the stock. He realized that conducting the bee business required younger blood, as the founder grew older, to carry on, and he joined with J. M. Stark, of Middleton, Idaho, and others in forming the Idaho Honey Company, which took over the entire stock of the Twin Falls Bee and Honey Company. Mr. Stinson was chosen president of the company, which was running some 3000 colonies of bees.

Mr. Stinson was well informed on all the latest developments in honey production and was always willing to give of his store of knowledge.

He aided in the formation of the

Idaho State Honey Producers' Association and was its first secretary, and helped secure the passage of laws for the benefit of Idaho beekeepers.

Mr. Stinson was always genial and kind and the beekeepers feel that they have lost a loyal friend.

Frank Beach,
Idaho.

Riverside County Has Interesting Meeting

The Riverside County Honey Producers' Association had a wonderful meeting recently, when Dr. C. R. Maines, chemist for the California Honey Commodity Company at Up-land, California, talked about honey as a food. Dr. Maines has had many years' experience in honey research and is a champion for honey. He is endeavoring in every way possible to secure attention to honey for its food value.

In addition to Dr. Maines, there were about forty beekeepers in attendance, and the following honor guests: H. L. Weims, Bakersfield, president of the California State Association; Dr. Eckert, University of California; M. H. Krebs, state inspector of apiaries; George W. York, editor, Bees and Honey; A. E. Bothel, Riverside County Agricultural Commission.

The following officers were elected for 1932: President, Charles S. Kinzie, Arlington; vice-president, William C. Reeves, Riverside; secretary, James Moore, Riverside.

James Moore,
Secretary.

Grass at the Hive Front

Old burlap—waste fertilizer sacks, etc.—placed in front of a hive will keep the grass down as well as anything. It also makes excellent smoker fuel.

S. F. Haxton,
Pennsylvania.

Bees Take a Trip to India

According to the St. Louis Globe-Democrat, two colonies of bees left Cheltenham, England, for India by airplane, from the apiaries of A. H. Bowen, subscriber and contributor of the American Bee Journal. Bowen is one of the large commercial beekeepers of England, with apiaries in the Cotswold hills.

It is interesting to note that on this trip special precautions were taken to insure the pilot's safety in event any bees escaped in the plane. This is a good idea.

Fred H. May, Illinois.

YORK'S PACKAGE BEES

== AT SUMMER PRICES ==

Thousands of packages and queens. Quality Bred Italians. Over-weight packages, lower prices. We guarantee our bees and queens to please you in every respect.

Our new folder now ready with much information regarding our bees, service and prices. Ask for a copy today and save the difference.

Complete Stock of Lewis Beeware and Dadant's Foundation at Catalog Prices.

YORK BEE COMPANY, Jesup, Georgia

BRIGHT ITALIAN BEES AND QUEENS

All packages headed by famous "Diamond" select young laying queens

	1-25	26-50	51 up
2 lbs. with queen	\$2.00	\$1.95	\$1.85
3 lbs. with queen	2.75	2.65	2.50
2-frame nuclei with queen	2.50	2.40	2.25
3-frame nuclei with queen	3.20	3.15	3.00
Orchard packages—5 lbs.	4.50	4.40	4.25

Queens 50c each. Deduct price of queen for queenless packages

Full overweight allowed. Health certificate with each shipment. Safe arrival and satisfaction guaranteed. Orders filled promptly. **READY FOR SHIPMENT NOW!**

If orchard packages wanted in special style, advise.

GARON BEE COMPANY - - DONALDSONVILLE, LA.

BUY BEE SUPPLIES NOW

PRICES are lower than they have been in many years. Every depression is followed by a period of prosperity, when prices go up. Take advantage of these low prices before they start on the upward trend.

Write for our catalog of new, low prices for 1932.

A. H. RUSCH & SON CO.
Reedsville, Wisconsin

CHEAPER PRICES FOR 1932

2-lb. Pkg. with Queen—1 to 10, \$2.25; 11 to 50, \$2.00; over 50, \$1.75
3-lb. Pkg. with Queen—1 to 10, \$2.90; 11 to 50, \$2.65; over 50, \$2.40

We guarantee satisfaction, prompt shipment, no disease, quick express service, light cages that save express, and as good quality as is possible to produce.

GEO. A. HUMMER AND SON
PRAIRIE POINT . . . MISSISSIPPI

Mention the American Bee Journal When Writing Advertisers



My Business Increase Is Due to the Work of American Honey Institute

"Enclosed find check to the order of American Honey Institute. I deeply appreciate the wonderful work the Institute is doing to promote a more general use of honey. In my estimation, American Honey Institute is performing a most valuable service to beekeepers and all selling honey and honey products. It is worthy of 100 per cent support.

"My business in honey, honey candy and honey products is gradually increasing and I honestly feel that this increase is due to the work of American Honey Institute. I make free use of all the information afforded by the Institute. Please accept my hearty wishes for your continued efforts for the beekeeping industry."

John F. Hawkins,
Pennsylvania.

One more in the list of enthusiastic supporters — and their number is increasing rapidly. It is *your* Institute. It serves *your* industry. It deserves *your* support. *Is it getting it?*

It is so easy to identify yourself with the Institute, to feel that you have done your share. Let's work and reap together and let's do it in the cheapest and easiest way we have yet found — through American Honey Institute.

Basis of Support -- Honey or Money

Honey, 20 pounds out of each ton produced; money, \$1.00 per ton. Choose either way, but use this coupon now.

If you do not have the money, send honey. A list of those who will receive it and turn it into cash for the Institute is given on page 169. Honey should be shipped to receivers in 60-pound cans only. Comb honey should not be shipped unless in large quantities and under special arrangement with the receiver, because of the danger of breaking.

AMERICAN HONEY INSTITUTE,
30 KENMORE ROAD,
INDIANAPOLIS, INDIANA.

I pledge my support to the work of the American Honey Institute for 1932. Enclosed is my check for _____ herewith. I have

sent _____ pounds of honey to _____ (Name receiver.)
who will send value in money to you.

Name _____

Address _____

(Mail to American Honey Institute, 30 Kenmore Road, Indianapolis)

This space contributed by DADANT & SONS, Hamilton, Illinois

BERRY'S RELIABLE BEES AND SERVICE

PACKAGES QUEENS

Thirty-eight Years of Select Breeding
Pure Three-banded Italians Only
at Lower Prices Now

	2-lb.	3-lb.
1 to 6 pkgs.	\$2.75 each; \$3.25 each	
6 to 25 pkgs.	2.50 each; 3.00 each	
25 to 50 pkgs.	2.25 each; 2.75 each	
50 to 100 pkgs.	2.00 each; 2.50 each	

Select Untested Queens, 75c each

Safe arrival, prompt service and entire satisfaction guaranteed

We accept Canadian money. No exchange

M. C. Berry & Co.

Box 696

MONTGOMERY, ALA.



CAUCASIANS

have all the good traits of Italians, plus extra gentleness, less swarming, more prolific, longer tongues, less robbing and more dependable workers.

2-lb. package with queen	\$3.25
8-frame colony with tested queen	10.00

CARNIOLANS

Best of winterers, rapid building up in the spring, very gentle, very prolific at all times, most excellent workers. My own and Jan Strgar imported strain. Twenty-sixth year with them.

2-lb. package with queen	\$2.85
8-frame colony with tested queen	8.50

Lower prices in lots. Give me your needs. More convenient for northeastern states and southern Canada. Less distance to ship, arrive in better condition, less transportation costs.

Packages and colonies ready May 5 on.

ALBERT G. HANN

Glen Gardner, New Jersey

Choice 3 Banded ITALIAN QUEENS, 50c EACH

When you buy our queens you get queens from a real queen breeding apiary. We produce every queen we ship out from our very best three-banded breeding queens. We rear these queens by methods that enable us to guarantee them to equal any queens money can buy. I care not where you go, you cannot find better queens. We will make prompt shipment of all orders. No disease. Safe arrival and satisfaction guaranteed.

O. D. RIVERS, Powderly, Texas

BIG LEGHORN CHICKS

"Kerlin-Quality"—World's Great Money Makers — Trapped breeders. Contest winners. Healthy — Mountain bred. Low 1932 Prices. Big discount on early orders. Free feed with chick order. Valuable 40 page Poultry Book free. Kerlin's Poultry Farm, 212 Walnut Road, Centre Hall, Pa.



PALMETTO QUEENS AND BEES

Quality bred Italian bees and queens will not fail you. Make your dollars do double duty here. Book your orders early. One queen, 55c; six, \$3.25; twelve, \$6.00; fifty, \$22.00. Two-pound packages Italian bees with queens, \$2.00 each, any number; 3-lb. packages, 50c each additional package. Overweight packages, pure Italian bees, safe arrival and satisfaction guaranteed. Add 10% on Canadian orders.

C. G. ELLISON, BELTON, S. C.

Crop and Market Report

Compiled by M. G. Dadant

For our April report we asked our reporters to answer the following questions:

1. What per cent of 1931 crop left on hand?
2. How is it moving?
3. How have bees wintered?
4. What are the moisture and plant conditions?

Per Cent of Honey on Hand

Our reports are considerably in variance. It shows particular sections of the country which apparently have much more honey on hand than the balance. The New England States seem to be very well cleaned up, no reporter giving more than 10 per cent left on hand. New York and the Atlantic Coast states similarly are sold down to 10 and 15 per cent and none of them are in doubt of clearing up the balance before the new crop comes.

Among the southern states, Georgia and Florida apparently have by far the largest amount on hand, Georgia reporting at least 40 per cent of the crop and Florida in some instances 50 to 60 per cent, with one producer saying that he was still selling on the 1930 crop.

Louisiana similarly has a considerable quantity on hand, totaling perhaps 30 per cent, and Texas reports from 10 to 15 per cent on hand. The balance of the southern states seem to be fairly well sold out, with no question of any great carryover.

Pennsylvania seems to be pretty heavily stocked with honey, and the same conditions exist, but to a less extent, in Indiana and Michigan.

The western plains states apparently have cleared up practically all of their honey, and the intermountain territory is fast getting into a favorable shape. One of the large distributing organizations states they have approximately 25 per cent of the 1931 crop on hand, with all the 1930 crop disposed of, but individual reporters in many instances claim that their own individual crop has been cleared up and that they are now buying from others to supply the demand. This is particularly true of the Dakotas, Nebraska, and Kansas.

Among the intermountain states, probably Colorado and Wyoming have the largest amount still left on hand. Along the coast there is very little honey yet to be marketed, the most of it being in northern California and in Washington.

Honey Moving

There is almost uniformity of reports as to honey moving very slowly. Fortunately in a few instances this is interspersed with a statement that honey is moving fairly well and much better than it did a month or more ago. Those states reporting fair movements of honey are New York, Maryland, Ohio, Iowa, Michigan, Wisconsin, Minnesota, Nebraska, Kansas, South Dakota, and Montana.

The Canadian provinces also unanimously report a fair to good movement of honey, with a small amount left on hand, except in the province of Ontario. The prairie provinces seem to be very well cleared up, as does British Columbia. Ontario is in much better condition in this way also than it was a year ago.

All in all, although honey is moving still very slowly and without any appreciable quickening of price, yet there seems to be a better demand than there was a month or even two months ago, provided a higher price

is not demanded. The consuming public does not seem to be buying where there is an appreciation in prices.

Wintering of Bees

Again we have almost a unanimous report of good wintering of bees, the only exception being in the Northwest, particularly the states of Idaho, Wyoming, and Montana, where there has been such continuous cold over such a long period. In these places it is feared that there will be considerable losses of bees through the winter.

There are, of course, quite a large number of states which are reporting that they question whether bees will have enough stores to carry them through to the next crop, and this refers to practically all of the states in the temperate, mild weather belt of the past season, which has probably had a larger consumption of stores than would an ordinary winter interspersed with a number of cold spells. An examination of our own bees, however, would indicate that the consumption of stores has not been as heavy as we had anticipated.

There is no doubt, however, but that the beekeeper will have to watch his bees closely as soon as the warm weather appears and check up on the stores, as undoubtedly the consumption of stores generally is heavier in a very mild winter such as the one we have just experienced.

Moisture and Plants

There are a number of exceptions to the good reports coming in. We believe that this year reports are more unanimously for good conditions, however, than they have been for many years in the past. The entire clover belt seems to have had moisture and in sufficient time so as to insure a fair stand of the clover plants this year. The northern section of the belt, however, comprising the states of Minnesota, Wisconsin, and Michigan, with parts of Indiana and Ohio, seems to have had drought too long last fall to get the clover plants started, and in these sections the reports coming in are to the effect that it does not look like there would be possibly a good enough stand of clover to depend upon a crop from it.

This is overbalanced by many reports coming in from sections farther south, that clover is in excellent condition, and, as one reporter expressed it, "This looks like a white clover year."

In the mountainous sections the snows have been particularly heavy and it looks like there would be plenty of water this year for irrigation purposes, the first time for two or three years at least. In some sections of the intermountain country, however, it is apparent—and this applies particularly to Montana and North Dakota and Idaho—that the dry weather last year killed out the sweet clover and alfalfa to such an extent that it is a question whether there will be sufficient to guarantee a very heavy honey yield.

The southern states seem to be fortunate, except that Georgia and Florida are still reporting insufficient moisture to make for best honey plant conditions. California, for the first time in several years, seems to have had a fairly good amount of moisture, but reporters in the southern part of the state still say that more moisture is needed to secure a good crop. However, we believe from other reports coming in that the honey crop will more nearly approach normal in California this year than it has in the past several years.

TEXAS BEES AND QUEENS ARE BETTER

If you have never tried Texas bees you have a surprise coming. Direct from strong colonies that are full of young bees. My aim is, first and last, satisfaction. You must be satisfied. My packages are composed of young Italian bees and selected young laying queens, health certified by state. Honest weight with 12% overweight, light cages and prompt service. My bees are three-banded Italians. I can also furnish goldens on request. My prices are: two-pound package with select queen, \$2.00 each; three-pound package with select queen, \$2.50 each. Queens, 60c each. Discounts allowed on quantities. Can also furnish nuclei and orchard packages. Fast express service—rush orders solicited.

A. W. NATIONS :: DONNA, TEXAS

We Are Cash Buyers of Honey and Beeswax
Submit samples, and best prices, freight prepaid
Cincinnati. We also furnish cans and cases.
Fred W. Muth Co. Pearl and Walnut
Cincinnati, Ohio

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Buy and Sell All Grades Extracted Honey
References: 1st National Bank, R. G. Dun or
Bradstreet's Commercial Reports.

The BEEKEEPER'S EXCHANGE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

BEES AND QUEENS

BASSETT'S queens and package bees. Queens are leather colored and produce three-banded bees. Queen prices, April and May: Select Italians, one, 90c; twelve at 75c each; fifty or more at 65c each. Guarantee no disease, safe arrival, and satisfaction in every way. A postal will bring circular and prices of package bees. See display ad in March issue. IXL Apiaries, C. Bassett, Prop., Ripon, Calif.

WRITE for special prices on our golden Italian queens. Sam Hinshaw & Son, Randleman, N. C.

WARD'S Italian queens, 75c each; 2-lb. packages, \$3.25; 3-lb. packages, \$4.25. All prepaid. C. W. Ward, R. 1, LeRoy, Kans.

MIDDLE TENNESSEE APIARIES—Italian queens, 60c each. Joe B. Tate, 1929 Lischey Ave., Nashville, Tenn.

CARNIOLAN and Italian queens. Early queens, tested, \$1.00; untested, 75c. Write for price on package bees. C. B. Bankston, Buffalo, Texas, Box 65.

DIEMER'S three-banded Italian queens in April and May, 75c each. After May, 50c each. A discount on large orders. Guaranteed and state inspected. Prompt service. J. F. Diemer, Liberty, Mo.

LOWER PRICES on package bees and "Queens of Quality." It will pay you to get my figures. J. F. McVay, Jackson, Ala.

GOLDEN ITALIAN queens, honey getters and gentle, 60 cents each. A. M. Kelly, Bell, Fla.

THREE-BANDED Italian queens, gentle honey gathering strain, 60c each. Lilburn Neinst, Brenham, Texas.

BUY the good comb package built on standard frames and drawn from Dadant's wired foundation. Two pounds, two combs and young queen introduced for \$3.75. Jes Dalton, Kenner, La.

TO INTRODUCE—Bargain prices on first fifty packages bees. Also save on express. Atha Hardy, Pulaski, Tenn.

IF you like extra yellow Italian bees that are good workers, gentle, and not bad to swarm, my queens will produce them for you. Prices May and June: 1 to 11, 80c each; 12 to 23, 70c each; 24 to 36, 60c each; over 36, 50c each. Tested, \$1.25; select tested, \$2.00. With health certificate. Safe arrival and satisfaction insured. Ask for circular. Hazel V. Bonkemeyer, R. 2, Randleman, N. C.

GOLDEN queens, yellow to tip: Untested, 50c; tested, \$1.00. Satisfaction guaranteed. H. G. Karns, Green Bay, Va.

ITALIAN queens, 50c. Bees, two pounds, \$1.90; three pounds, \$2.50. Orchard package on three frames, equal to six pounds bees, \$4.00. Will trade for white honey or beeswax. Homer W. Richard, 1411 Champnolle, El Dorado, Ark.

The "Old Reliable"

Covers America Like the Dew Covers Dixie

C. G. Ellison
breeder of
Palmetto Italian Queens and
Bees

Belton, S. C., R. 3,
December 10, 1929.
American Bee Journal.

Gentlemen:

You may put my ad in the January number of the old reliable American Bee Journal. She covers America like the dew covers Dixie.

Sincerely yours,
C. G. Ellison.

CAUCASIAN queens ready after April 10. One, 80c; six, \$4.75; twelve, \$8.40. Write for price on larger quantities. Safe arrival and satisfaction guaranteed. Tillery Bros., R. 6, Greenville, Ala.

BEES AND QUEENS—Two pounds of bees with queen, \$1.75; three pounds, \$2.25, in quantities. See my large ad on page 138. H. E. Graham, 702 E. Twenty-third St., Cameron, Texas.

WILL EXCHANGE package bees, nuclei or queens for bee supplies. Crenshaw County Apiaries, Rutledge, Ala.

CAROLINA QUEENS—Line bred, three-banded, leather-colored Italians. The best honey gatherers, hardy and prolific. All orders filled promptly. If any queen is not satisfactory, please return. Not ordinary queens, but as good as the best. Ready for shipment April 20. Select (one grade only), one to fifty, 60c each; fifty or more, 55c each. Carolina Bee Co., Kenansville, N. C.

PACKAGE bees and queens in U. S. standard shipping cages at very low prices. Write to Thomson & Hodges, Anderson, Calif., or Coeur d'Alene, Idaho.

HIGH GRADE bees in hives. If interested, write George Schilling, State Center, Iowa.

GOLDEN Italian queens as good as the best. Tested, \$1.25; select tested, \$2.00. Untested, about May, 85c; six, \$4.80; twelve, \$9.00. For larger orders, write for prices. Safe arrival, satisfaction to United States, Canada, Mexico and Cuba. Other foreign countries write for prices and terms. D. T. Gaster, R. 2, Randleman, N. C.

GOLDEN Italian queens for 1932. The big, bright, hustling kind (the kind that get the honey). Prices for April and May, 75c each; \$60.00 per 100. Two-pound package with queens, \$2.50 each; ten or more, \$2.35 each. Three-pound, \$3.15 each; ten or more, \$2.90 each. Write for prices on White Giant rabbits. E. F. Day, Honorville, Ala.

PACKAGE BEES, NUCLEI AND QUEENS—Bright, three-banded or golden Italian. The most prolific, gentle honey producers, less inclined to swarm. Untested queens, any number, 50c each; 2-lb. package and young laying queen, \$2.00 each, any number; 3-lb., \$2.50 each. Two-frame nuclei with queen, \$2.50. We offer nuclei because we have never had disease of any kind. Furnish health certificate, guarantee safe arrival, satisfaction. Taylor Apiaries, Luverne, Ala.

MR. BEEKEEPER—Write and get my prices on bees and queens. A postal card will bring it. Lowest prices possible, quality of the best, full weight of good young bees, queens as good as the best. Safe delivery guaranteed. Our losses average less than

2 per cent; made good at once. Promptness of service. O. P. Hendrix, West Point, Miss.

PACKAGE BEES—Three-banded Italians. You can save money by ordering your package bees from the Little River Apiaries. Lower express charges. Bees shipped in light cages, syrup feeder in cage. Full weight and prompt service to every customer. We are prepared for shipping young bees and young queens, the kind that pay a profit the first season. Two-pound package without queen, 5 to 100, \$1.50 each; two-pound package with queen, 5 to 100, \$2.00 each. Three-pound package without queen, 5 to 100, \$2.25 each; three-pound package with queen, 5 to 100, \$2.75 each. Safe arrival guaranteed. Health certificate with every shipment. Little River Apiaries, Box 83, Gause Texas.

FOR SALE—Italian bees and queens; nothing but the best. Queens, 50 cents each. One pound of bees with young queen, \$1.75; two pounds of bees with young queen, \$2.75. All charges paid to your postoffice. Add 15 per cent extra to Canada. Graydon Bros., Greenville, Ala., Route 4.

APRIL QUEENS—Good Italian, untested, 60c each; ten for \$5.50. D. W. Howell, Shellman, Ga.

FOR SALE

FOR SALE—200 eight-frame, comb honey supers, complete with fixtures, painted, 35c each; 100 ten-frame, 45c each, all F. O. B. Ovid, Colo. Also 200 ten-frame full-depth extracting supers with drawn combs. Make a bid on them. W. E. Brock, Ovid, Colo.

100 LBS. medium brood wired foundation for split bottom bars; some thin super foundation $3\frac{3}{4} \times 16\frac{1}{2}$, some medium brood $5\frac{1}{2} \times 16\frac{1}{2}$. All the above Dadant & Sons' make, all in perfect order. Make me an offer for the whole or part. C. H. Root, 30 Irving Place, Red Bank, N. J.

"OLD BEE BOOKS FOR SALE." John F. Hawkins, Box 203, Chester, Pa.

HONEY FOR SALE

HONEY—Yes, we have it. Chunk, comb and extracted, at prices to sell. W. S. Earls & Son, New Canton, Ill.

BUCKWHEAT No. 2 comb and buckwheat extracted. Write F. J. Smith, Castalia, O.

\$1.50 PER GALLON, six per case, or five-gallon tins, one or two per case, buys our fine filtered new crop 100% pure maple syrup. Freight paid 1000 miles from the heart of the world's maple industry, Madison, O. One-pound box pure maple cream or sugar with nuts or plain, 50c; two pound boxes, \$1.00, prepaid in U. S. only. Try a box of our wholesome pure maple candy black walnut cream or sugar once before you are kidnapped, communized or pass on. Write today sure for new illustrated circular and samples. Griswold Honey Co., Madison, Ohio, U. S. A.

BUCKWHEAT honey, granulated, in sixties, 5c per pound. C. F. Dalrymple, Sheridan, N. Y.

HONEY FOR SALE—Any kind, any quantity. The John G. Paton Company, 230 Park Avenue, New York.

FOR SALE—White clover honey in 60-pound cans. None finer. Satisfaction guaranteed. J. F. Moore, Tiffin, Ohio.

HONEY FOR SALE—All grades, any quantity. H. & S. Honey and Wax Company, Inc., 265 Greenwich St., New York City.

HONEY—We sell the best. Comb in carriers of eight cases each; extracted, basswood, buckwheat, sweet clover, white clover and light amber. Tell us what you can use for prices. A. I. Root Company of Chicago, 224-230 West Huron St., Chicago, Ill.

FOR SALE—Extra choice white clover honey, case or carload; also amber. David Running, Fillion, Mich.

FOR SALE—Northern white, extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

WHITE clover extracted honey. Write for prices and samples. Kalona Honey Co., Kalona, Iowa.

FOR SALE—White clover comb and extracted in sixties. C. Holm, Genoa, Ill.

NEW CROP shallow frame comb honey, also section honey; nice white stock, securely packed, available for shipment now. Colorado Honey Prod. Ass'n, Denver, Colo.

CLOVER honey, choice, ripened on bees. Satisfaction guaranteed. Case or quantity. E. J. Stahlman, Grover Hill, Ohio.

STOLLERS EXCELLENT quality clover honey, comb and extracted. Unexcelled. The Stoller Apiaries, Latty, O.

HONEY FOR SALE—Keep your customers supplied with honey. We can furnish white and light amber honey at attractive prices. Packed in 60-lb., 10-lb. or 5-lb. tins. Dadant & Sons, Hamilton, Illinois.

FOR SALE—White clover honey in sixties, 7c per pound. Joseph H. Hoeft, Otterville, Ohio.

CAR or less white extracted sweet clover and alfalfa. George Seastream, Moorhead, Minn.

WHITE COMB HONEY—Extracted and chunk. Prices on request. One-pound sample, 15c. F. W. Summerfield, Grand Rapids, Ohio.

CLOVER extracted honey, case or ton. Roy Littlefield, Exira, Iowa.

FOR SALE—300 cases comb honey at reduced prices. State your wants. H. G. Quirin, Bellevue, Ohio.

HONEY AND BEESWAX WANTED

WANTED—Shipments of old comb and cappings for rendering. We pay the highest cash and trade prices, charging but 5 cents a pound for wax rendering. Fred W. Muth Company, 204 Walnut St., Cincinnati, Ohio.

WANTED—A car or less quantity of white honey in 60-lb. cans. Mail sample and quote lowest cash price for same. J. S. Bulkley, 816 Hazel St., Birmingham, Mich.

WANTED—Car lots honey; also beeswax, any quantity. Mail samples, state quantity and price. Hamilton, Wallace & Bryant, Los Angeles.

WANTED—Old combs and cappings for rendering. We get all the wax, charging but 4c per pound for rendering. High cash paid for wax. Ohmert Honey Company, Dubuque, Iowa.

FOR EXCHANGE

STANDARD Hoffman frames, manufactured from Idaho white pine, \$30.00 per thousand. Prices on other supplies to match. Will trade a limited number of frames for white honey and beeswax. Inquire Thomson Honey Co., Coeur d'Alene, Idaho.

WILL EXCHANGE package bees and queens for shipment between April 1 and 23 for woodworking machinery. P. M. Williams, Mt. Willing, Ala.

WANTED

WANT BIDS on 100 or more two-pound oversized package bees with queen. Economy Supply Station, Mooreton, N. D.

WANTED—To buy bees and supplies. Robins Bros., Mt. Sterling, Ill.

WANTED—Bees. Must be healthy and strong. Edw. Klein, Gurnee, Ill.

POSITION WANTED

WANTED—Job in apiary. Plenty of experience. Do not drink or smoke. State wages able to pay, etc. Ben Steen, Manning, Iowa.

SUPPLIES

I'll manufacture your wax into Rietsche medium brood foundation at 4 cents per sheet. John Stegedirk, Hubbard, Iowa.

BEEKEEPERS' handy 3-in-1 feeder. Takes the place of the inner cover. Is always ready; no worry, no smoke, no veil. Get prices and circular. J. E. Will, Independence, Mo.

SAFIN queen introduction cage, one, 25c; five for \$1.00. Allen Latham, Norwichtown, Conn.

FOR SALE—Queen mailing cages. Material, workmanship and service all guaranteed. Write for quantity prices. Hamilton Bee Supply Co., Almont, Mich.

BEST QUALITY bee supplies, attractive prices, prompt shipment. Illustrated catalog on request. We take beeswax in trade for bee supplies. The Colorado Honey Producers' Association, Denver, Colo.

FOR SALE—We are constantly accumulating bee supplies, slightly shopworn; odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list of our bargain material. We can save you money on items you may desire from it. Dadant & Sons, Hamilton, Illinois.

THE DADANT SYSTEM IN ITALIAN—The "Dadant System of Beekeeping" is now published in Italian, "Il Sistema d'Apicoltura Dadant." Send orders to the American Bee Journal. Price \$1.00.

MISCELLANEOUS

CHINESE VITEX (negunda Incisa) seed, 50c per oz., prepaid. Instructions for growing included. George J. Brown, 994 N. Van Ness, Fresno, Calif.

PLANT VITEX THIS SPRING—Don't depend on your neighbor for a location; make one of your own. 12- to 24-in. trees, 50c each; ten or more, 30c each; 25- to 36-in. trees, 60c each; ten or more, 40c each. Vitex seed, \$1.50 per ounce; trial packet (200) seeds, 25c, all prepaid. Stamps not accepted. Charles F. Mottet, Webb City, Mo.

VIKLA AUTOMATIC swarm trapper. Practical, efficient. Literature free. Vikla Manufacturing Co., Lonsdale, Minn.

WILL TRADE 160 acres valley land in Oregon and cash for bees in central states. Box A. M. B., American Bee Journal, Hamilton, Ill.

GROW VITEX TREES for beauty and bees. Twelve- to 24-inch trees, 30c each; twenty-five or more at 25c each; 24- to 36-inch trees, 50c each; twenty-five or more, 40c each, all prepaid. Seed at \$1.50 per ounce. Joe Stallsmith, Galena, Kansas.

PLANS FOR POULTRY HOUSES—150 illustrations. Secret of getting winter eggs. You need this book. Write for free offer and sample copy of Inland Poultry Journal, 523 Holliday Bldg., Indianapolis, Ind.

MARBLEBOARD BINDER—For back copies of the American Bee Journal. Will hold two years. Keeps your magazines in shape for ready reference. Price only 75c, postpaid. American Bee Journal, Hamilton, Ill.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, 10/6. The Apis Club, Brockhill, London Road, Camberley, Surrey, England.

HAVE YOU any Bee Journals or bee books published previous to 1900 you wish to dispose of? If so, send us a list. American Bee Journal, Hamilton, Ill.

Send Your Institute Honey Donations to These Receivers

These individuals and firms have agreed to take in honey donated to the American Honey Institute, sending a check to Russell H. Kelty, treasurer of the American Honey Institute, East Lansing, Michigan, for the value of the honey at the market price, less the freight:

Honey Receivers

Allen Latham, Norwichtown, Conn.
Bee-Kist Products, Inc., 8272 Jefferson Street, Phoenix, Ariz.

A. G. Woodman Company, Grand Rapids, Mich.

Dadant & Sons, Hamilton, Ill.
James Gwin, Department of Markets, Madison, Wis.

Lothrop Nursery Company, Aberdeen, S. D.

T. W. Burleson, Waxahachie, Tex.
O. S. Bare, Extension Entomologist, College of Agriculture, Lincoln, Neb.

Sioux Honey Association, Sioux City, Iowa.

H. M. Krebs, Sacramento, Calif.
George C. Barton, Meriden, N. H.
Colorado Honey Producers' Association, Denver, Colo.

Above receiver nearest you is to be notified of the number of pounds you contemplate sending in before shipment is made.

STATEMENT OF OWNERSHIP

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of American Bee Journal, published monthly at Hamilton, Illinois, for April 1, 1932.

STATE OF ILLINOIS, } ss.
County of Hancock, }

Before me, a notary public in and for the state and county aforesaid, personally appeared M. G. Dadant, who, having been duly sworn according to law, deposes and says that he is the business manager of the American Bee Journal, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, rendered by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse side of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager are:

Publishers American Bee Journal, Hamilton, Ill.
Editor, C. P. Dadant, Hamilton, Ill.
Managing editor, G. H. Cale, Hamilton, Ill.
Business manager, M. G. Dadant, Hamilton, Ill.

2. That owners are:
American Bee Journal, Hamilton, Ill., owned by

C. P. Dadant, Hamilton, Ill.
H. C. Dadant, Hamilton, Ill.
V. M. Dadant, Hamilton, Ill.
C. S. Dadant, Hamilton, Ill.
L. C. Dadant, Hamilton, Ill.
M. G. Dadant, Hamilton, Ill.
Leon Saugier, Hamilton, Ill.
Joseph Saugier, Hamilton, Ill.

That the known bondholders, mortgagees and other security holders owning or holding one per cent or more of the total amount of bonds, mortgages or other securities are: None.

(Signed) M. G. DADANT,
Business Manager American Bee Journal.
Sworn to and subscribed before me this eighth day of March, 1932.

MINNIE S. KING,
Notary Public.
My commission expires Nov. 19, 1933.

PETTIT'S COMBLESS PACKAGE BEES

With Best Young Italian Queens

Over eight thousand pounds net weight shipped last year to scores of satisfied customers.

Book orders in advance if possible, but we specialize in telegraphic service.

From our Canadian customers we always accept Canadian money.

The following prices are so low that we must request cash with order:

1932 PRICES

Size of Order	2-lb. Pkg.	3-lb. Pkg.	4-lb. Pkg.	5-lb. Orch. Package
2-14 packages	\$2.50	\$3.25	\$3.75	\$4.50 each
15-49 packages	2.25	3.00	3.50	4.25 each
50 up	2.00	2.75	3.25	4.00 each

For queenless packages, deduct 60 cents each.
No orders taken for less than two packages.

All shipments are made by express.

Complete satisfaction is guaranteed.

MORLEY PETTIT

:-:-

Albany, Georgia

Yancey Hustler Bees and Queens

Three-Band Italians -- Ready to Go Now

	1-9	10-24	25-49	50 up
2-lb. Package with Queen	\$2.25	\$2.15	\$2.00	\$1.80
3-lb. Package with Queen	3.00	2.90	2.75	2.50
Queens—every one select:—70c each; \$7.00 per dozen; \$50.00 per 100				

We give you—25% overweight; young bees; no drones;
prompt, personal service

We guarantee—To ship only pure Italian bees; all queens purely mated, and to give you good service as layers; safe arrival and your complete satisfaction on everything.

YOU CAN STILL MAKE MONEY WITH OUR PACKAGES

CANEY VALLEY APIARIES

Bay City Texas

An adequate supply of Dadant's Crimp-Wired Foundation will assure you fine combs this season. You are doubly protected, too, when you know it is made of pure beeswax.

DADANT & SONS, Manufacturers, HAMILTON, ILL.



ROY'S SPECIAL PACKAGE BEES WITH QUEEN

SPECIAL ORCHARD PACKAGES, OR EARLY BUILDER

A two-frame nucleus with three pounds of bees and queen, \$3.50, any number.

Two-pound packages with queen, one to five, \$2.25; six or more, \$2.00.

Three-pound packages with queen, \$2.75, any number.

Four-pound packages with queen, \$3.50, any number.

Two- and three-frame nucleus with queen same price with comb packages.

Also ship combless packages with queen at same price

Please refer to February or March issue for specification and guarantee.

Address WILLIE ROY, Hessmer, La.

Mention the American Bee Journal When Writing Advertisers

Latham's Queens
"She-Suits-me" Queens
are line-bred three-banded
Italians

This Strain of Italians is unsurpassed in tongue-length and also in nectar gathering

1 untested laying Queen 80 cents
6 for \$4 50 for \$31

Allen Latham
Norwichtown
Conn.

Season May 10 - have!

Every Beekeeper That Produces Honey or hopes to

Realizes that it takes more honey per colony than ever before to make a profit

Your honey crop depends on your judgment in buying bees and queens. No beekeeper can afford to buy bees and queens that are not backed by a reputation. For over twenty years L. L. FOREHAND has been furnishing thousands of beekeepers with bees and queens that have led in honey gathering, gentleness, disease resisting, and beauty. L. L. FOREHAND'S BEES AND QUEENS cost no more. You take no chances when buying from L. L. FOREHAND APIARIES, for we guarantee every package of bees and every queen to give perfect satisfaction or replace free of cost or refund your money, with all transportation charges. Prices—

2-lb. Pkgs. with Sel. Unt. Queens

1 to 10	\$2.00 each
10 to 20	1.90 each

3-lb. Pkgs. with Sel. Unt. Queens.

1 to 10	\$2.50 each
10 to 20	2.40 each

The above packages will have sufficient overweight to take care of shrinkage en route.

25% Overweight Packages

2-lb. Pkgs. with Sel. Unt. Queens

1 to 10	\$2.25 each
10 to 20	2.15 each

3-lb. Pkgs. with Sel. Unt. Queens

1 to 10	\$2.90 each
10 to 20	2.80 each

Queens—Select Untested

One, 70c; six, \$3.90; twelve, \$7.20

If wanted in larger quantities, write for prices, also delivered prices

L. L. FOREHAND

APIARIES

JESUP, GA.

Bright Italian Queens

You will be satisfied with them, when you work with bees produced by queens from my Golden Italian stock. They are as fine as you'll get anywhere; very gentle and easy to work with. Excelled by none. All large and uniform; very prolific, and excellent honey gatherers. By my scientific methods of selection of the best larvae, for queen-rearing, you get the best quality queens.

ORDER QUALITY QUEENS NOW

Single queen, \$1.00; two, 95c each; three, 90c each; four to nine, 80c each; ten to twenty, 70c each; all over twenty, 60c each.

Rieger's (Metairie, La.) Apiary
No. 1 Metairie Court, R. F. D. 6,
NEW ORLEANS, LA.

SOMETHING NEW

"Honey Jelly," a new way to prepare honey, eliminates the stickiness from honey, but the honey flavor is retained with a slight tartness.

F. J. Edwards' Prepared Pectin,
Honey Well Brand,
General Delivery, Sacramento, Calif.

Postpaid, package, 20c (makes five pounds jelly); dozen packages, \$2.00.

AN EASILY MANAGED HOME FOR YOUR BEES

THE MODIFIED DADANT HIVE



More Honey
at Less Cost

A good hive has all the room the queen needs and also room for food and young. Often over 100,000 cells are needed at one time. No hive but the Modified Dadant gives this room in one compact body. It produces big colonies and big crops.

Send for this 16-page booklet telling how the Modified Dadant Hive is used by successful honey producers.

DADANT & SONS, HAMILTON, ILLINOIS

PURE THREE-BAND ITALIAN BEES

Two-pound packages, 1-9, each\$2.25
Two-pound pkgs., 10-100, each 2.00
Tested queens, each75
Untested queens, each60

J. ALLEN :: Catherine, Alabama

Mott's Northern Bred Italian Queens

Practically non-swarming
Guaranteed purely mated or a free queen, means tested in the end.

April and May, \$1.00; six, \$5.50; twelve, \$10.00. June, \$1.00; three, \$2.80; six, \$5.25; twelve, \$9.75; fifty, \$35.00; 100, \$65.00. Select tested, \$2.00; virgins, 50c. Free list with testimonials. Satisfaction guaranteed.

E. E. MOTT & SON, Glenwood, Michigan

NO SWEEPING CLAIMS "JUST GOOD" BEES AND QUEENS

AT LOWEST PRICES SINCE NINETEEN HUNDRED

We are not advertising men, but queen breeders. No lengthy spiel about how good, but just three reasonable statements:

First. Customers who have bought yearly since 1914, my first year of advertisement separately from my father.

Second. Recommended by state inspectors both north and south.

Third. We use them in our six hundred colonies located in the famous tupelo regions, where enormous colonies early is essential. I know they are good. Let me convince you.

Untested, 60c each; twelve for \$6.60. Two-pound package of Italian bees with queen, F. O. B. my station, \$2.00; three-pound package with queen, \$3.00.

Write for prices on lots of twelve or more packages
Usual guarantee of pure mating, satisfaction and safe arrival in U. S. and Canada

N. FOREHAND :: DE FUNIAK, FLORIDA

BEES AND QUEENS GALORE

We are situated on main line of railway that connects with all the main lines of the North and West, insuring your bees to reach you on time and in nice shape. We do not have a single dissatisfied customer that we know of. Will have several thousand pounds of three-banded Italian bees, also several thousand queens, for April and May delivery. Plenty of efficient help to get them to you on time.

PRICES IN U. S. A.

2-lb. Package with Queen\$2.00
3-lb. Package with Queen 2.75
Queens, 60 cents each

Canadian shipments 10 per cent more than above prices

SHAW & HOMAN, Shannon, Miss.

Three-Banded Italians

Overweight packages, light shipping cages, young bees with select queens.
Prompt shipment. No disease.

Safe arrival and satisfaction guaranteed.

APRIL 1 OR LATER

Two-pound pkgs. with queens, lots of five\$2.00 each
Three-pound pkgs. with queens, lots of five 2.50 each

MAY 6 OR LATER

Two-pound pkgs. with queens, lots of five\$1.70 each
Three-pound pkgs. with queens, lots of five 2.10 each

QUEENS—April, 75c each; May, 50c each; June, 30c each

The Crowville Apiaries, Winnsboro, La.

NORMA'S SPECIAL

High quality Italian Queens and Bees at prices to meet with depression prices, as follows:
SPECIAL ORCHARD PACKAGES

A 2-frame nucleus, three additional pounds of bees with a young laying queen introduced, for\$3.50 each, any number

2-lb. packages with young laying queens 2.25 each, any number

3-lb. packages with young laying queens 2.75 each, any number

4-lb. packages with young laying queens 3.50 each, any number

2-frame nucleus with young laying queens 2.25 each, any number

3-frame nucleus with young laying queens 2.75 each, any number

All bees are shipped on standard Hoffman frames of brood and honey. Safe arrival guarantee and a health certificate with each shipment. All loss will be immediately replaced upon receipt of bad order report signed by express agent. Shipping season starts April 1. Orders booked with 10 per cent down, balance 10 days before shipment. Also ship combless packages upon request at same price as comb packages.

All prices are F. O. B. shipping point. Address

The NORMA'S APIARIES :: Hessmer, Louisiana

Rev. J. L. Mahussier, Prop.

NOTICE BEEKEEPERS

Many of you have been dissatisfied with your purchases of package bees in the past. For one time you can have the satisfaction of receiving what you buy and pay for, by sending your order to us. Why, we absolutely guarantee that you will receive them on time, full weight, young 1932-reared Italians of the very best, hardy, honey-gathering strain, and at the depression price.

Yours for service,

T. W. BURLESON & SON, Waxahachie, Texas

20 Years' Shipping Experience

2300 Colonies

LOOK!!

ACCREDITED AND CERTIFIED BEES AND QUEENS

The northern beekeeper demands better and purer bees. Alabama is meeting this long-felt need with accredited and certified bees and queens. If you want purer and better bees, order our Accredited and Certified stock. They are worth more, but our prices are reasonable, so why take the risk in buying cheaper and inferior stock elsewhere. If you desire complete information about Accredited and Certified bees and queens, drop us a card and we will mail you a circular pamphlet published by our State Department of Agriculture.

Via express collect—

2-lb. package with select untested queen \$2.50 each
Ten or more packages, \$2.25 each.

3-lb. package with select untested queen 3.25 each
Ten or more packages, \$3.00 each.

Prepaid prices via parcel post and mail quoted on request
Write for prices on large quantities

Select untested queens \$.75 each
Ten or more, 70 cents each.

Select tested queens 1.00 each

To Canadian customers: No exchange to pay, as we accept your money at its Canadian value.

I guarantee safe arrival, pure mating and entire satisfaction.

HAYNEVILLE APIARY COMPANY

W. E. Harrell, Prop.

HAYNEVILLE, ALABAMA



HURRY YOUR ORDERS HERE



Minnesota Beekeepers

Lowest prices since 1912 and every item equal or better. Lewis Beeware, "Standard of the Beekeeping World." Dadant's Foundation, "Choice of Expert Beekeepers."

You can save more money on your supplies this year than ever, by getting them right close home.

If you live near MINNESOTA, get your supplies quickly here. We fill orders the day they are received.

Lewis Beeware and
Dadant's Foundation
on hand at all times.



The Standard Lumber Co.
Winona, Minn.—Graceville, Minn.
Brainerd, Minn.

IMPERIAL ITALIAN QUEENS, PACKAGE BEES—NUCLEI

Queens, untested, \$1.00 each; two-pound package bees, \$2.00; three-frame nucleus, \$3.00. Discounts on large orders. Complete prices and catalogue on request. Saving in advertising expense passed on to customers. Quality and service that cannot be duplicated.

H. E. COFFEY, Queen Specialist
Whitsett, Texas

The FINEST 3-Banded ITALIAN QUEENS and PACKAGE BEES

Hardy, Prolific, Gentle, and Hustlers.

We guarantee safe arrival, full weight and the right price.

Send for circular

J.W. DiLULLO, Anderson, Calif.

CYPRESS BEE HIVES

No other wood known to man is so adapted for Beehives as Cypress. Bees like it, and by using Cypress throughout you reduce the disastrous effect of the waxmoth.

All wood parts, including frames, manufactured by us are made of Gulf Red Cypress, guaranteed to last longer than any other wood on the market today. Write for our 1932 catalog— it's free.

HOME BUILDERS SUPPLY, Inc.
WINTER HAVEN, FLORIDA

Good Advice for the Beginner

By George H. Williams
North Carolina

Before beginning, the habits of bees should be studied. Visit a beekeeper who has been in business who can give some information. Get some good books on beekeeping. Decide what kind of a hive to use, and use only one kind and size, to avoid trouble in handling. Determine whether to buy package bees or full colonies in the neighborhood.

It is my advice to insist on pure Italians, for they are most always gentle to handle and the beginner needs gentle bees at the start.

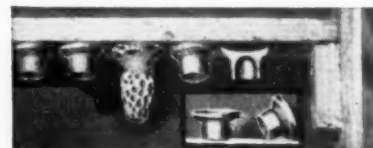
The beginner should always wear a veil, have a good smoker and good fuel. If he is nervous, it is wise to use bee gloves at the start and to handle the bees on a warm day, when the bees are busy at work and the hives not crowded.

Let me tell a little about my start. I did not know much about bees and had never seen a frame hive except at a distance, but I had desired to keep bees all my life, ever since I was big enough to know anything about them.

I bought a small swarm, just hived in an old box, from a beekeeper in the neighborhood, for 75 cents. From it I hived several swarms, all in boxes.

The third year I decided to try frame hives and bought some second-hand ones, but I soon found out that there were parts that were not standard. I could not find brood frames for them anywhere, although they were the same outside size as the standard ten-frame hive, but the covers, bottoms and supers would work, so I was only out the brood chamber. And since I had not paid much for them, I did not lose much.

Yet that was a lesson for me. Always buy standard bee supplies and only of one size. Never buy second-hand supplies without making certain that they are standard and that they are all alike. Sometimes the cheapest is the costliest in the long run.



O.K. QUEEN CELL CUPS. (All Wax.)
Pat. Pending.

Takes the place of the wood and wax queen cell cups. A great improvement. Have many advantages. 75¢ per 100, post paid O.K.B. Supply Co. W. Middletown, O.